MUSIC



COMPOSING MUSIC • PROGRAMMING MUSIC

Transposition Chart

0	С	C#	D	D#	Ε	F	F#	G	G#	Α	A#	B
1	C#	D	D#	Ε	F	F#	G	G#	Α	A#	В	С
2	D	D#	Ε	F	F#	G	G#	Α	A#	B	С	C#
3	D#	Ε	F	F#	G	G#	Α	A#	В	С	C#	D
4	Ε	F	F#	G	G#	Α	A#	B	С	C#	D	D#
5	F	F#	G	G#	Α	A#	В	С	C#	D	D#	Ε
6	F#	G	G#	Α	A#	В	С	C#	D	D#	Ε	F
7	G	G#	Α	A#	B	С	C#	D	D#	Ε	F	F#
8	G#	Α	A#	В	С	C#	D	D#	Ε	F	F#	G
9	Α	A#	B	С	C#	D	D#	Ε	F	F#	G	G#
10	A#	В	С	C#	D	D#	Ε	F	F#	G	G#	Α
11	В	С	C#	D	D#	Ε	F	F#	G	G#	Α	A#
12	С	C#	D	D#	Ε	F	F#	G	G#	Α	A#	B

Key Signatures

C – No flats or sharps	E – 4 sharps	C – No flats or sharps	Ab-4 flats
G – 1 sharp	B – 5 sharps	F – 1 flat	Db-5 flats
D – 2 sharps	F# - 6 sharps	Bb-2 flats	Gb - 6 flats
A – 3 sharps	C# - 7 sharps	Eb-3 flats	Cb-7 flats

Enharmonic Equivalents

B is the same as Cb

F# is the same as Gb

C# is the same as Db

Clef Examples



Scales

Scale Note Names: (Example C Major)

Note	Latin Name	Solfege
С	Tonic	Do
D	Supertonic	Re
E	Mediant	Mi
F	Subdominant	So
G	Dominant	Fa
A	Submediant	La
В	Leading Note	Ti

Notes On The Staffs

Treble Clef:	Note how the pattern repeats. For example if we were to continue the			
The spaces are:	spaces on the treble clef, the E in FACE is the beginning of the line			
FACE	pattern. So it would be:			
The lines are:	FACEGBDFACEGBDF			
EGBDF				
	And the line pattern would be:			
Bass Clef:				
The spaces are:	EGBDFACEGBDFACE			
ACEG	It's not hard to see the pattern. What makes it even easier for English			
The lines are:	speakers is the fact that part of it spells the word "Face". All you need to			
GBDFA	remember is the other three letters that follow FACE in the repeating pattern which are "G B D"			
Alto or C Clef:	Often a music teacher will use the following acronym to help students			
The spaces are:	memorize the line notes on the treble clef:			
GBDF				
The lines are:	Every Good Boy Does Fine.			
FACEG				
	To extend this:			
Alto or C Clef:				
The spaces are:	Every Good Boy Does FAC Every Good Boy Does.			
EGBD	We a good idea to leave this healtwards too.			
The lines are:	It's a good idea to learn this backwards too:			
DFACE	ECAF DBG ECAF DBG			

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Overview

The purpose of this is for general reference. The information on this subject can be pretty detailed. The knowledge in this book is from music theory classes I took years ago as well as personal observations and from research that I've done online. The recording section is geared towards a single musician recording rather than a band.

Terms

Term	Description
Accidentals	Sharps, flats or natural signs used to raise, lower or return a note to its normal pitch within a scale.
Adagio	At ease. A slow tempo falling between largo (slower) and andante (faster)
al coda	To the coda.
al fine	To the end.
Allegro	Cheerful, a lively fast tempo.
al segno	Return to the sign.
Alto	The lowest female singing voice and the highest male singing voice.
Andante	Going, a moderate graceful tempo between adagietto and moderato
Arpeggio	The notes of a chord played in succession.
Articulations	Accent – More Intensity
	Marcato – Most Intensity
	Staccatissimo - Shortest
	Staccato - Short
	Tenuto – Longer
Attenuate	The opposite of boost. To turn down or reduce.
Backbeat	In drumming, emphasizing beat 2 and beat 4.

Ballad	A song that uses common meter in its lyric form. A song that tells a story.
Baritone	A low range singing voice between tenor and bass. An instrument tuned lower than normal.
ВРМ	Beats Per Minute. In 4/4 time a beat is a quarter note, so each measure has 4 beats to it.
Caesura	A sudden silencing of the sound. A pause or break. A comma.
Call and Response	A vocal form in which a singer asks a melodic question or makes a statement and an ensemble responds.
Chromatic	Moving by half steps. A chromatic scale has twelve notes. Every note from root to root.
Coda	A section at the end of a piece which brings the piece to a close.
Cover	Slang. A new recording of a previously recorded song by another artist.
Crescendo	Gradually growing louder.
Cross Rhythm	Different rhythm patterns played simultaneously.
da capo	Indicates to return to the beginning of a piece.
da capo al coda	Indicates to return to the beginning of a piece and play it to the coda symbol, then jump to the coda section. Sometimes written D.C. al coda.
da capo al fine	Indicates to return to the beginning of a piece and play it to the fine symbol, Sometimes written D.C. al fine.
dal segno	From the sign. Indicates to return to the segno sign:
dal segno al capo	Indicates to return to the D.S. sign and play to the "to coda" indication, then skip to

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	the coda. Sometimes written: D.S. al Capo
dal segno al fine	Indicates to return to the D.S. sign and play to the "fine" sign.
Decrescendo	Gradually growing softer.
Diminuendo	Abbreviated as dim. Means diminishing.
Divisi	Often used in string sections where the notes are to be divided up by different players in a section.
Downbeat	The first beat.
D.S.	Dal Segno
Dynamics	Soft to loud: The p stands for piano meaning soft, the f stands for forte meaning loud and the m stands for mezzo meaning moderate. ppp - Pianissimo pp - Pianissimo p - Piano mp – Mezzo-Piano mf – Mezzo-Forte f - Forte ff - Fortissimo fff - Fortissimissimo
Enharmonic Equivalent	An enharmonic equivalent is when a key has more than one name. For example $C^{\#}$ is equal to D^{b} , $D^{\#}$ is equal to E^{b} , $F^{\#}$ is equal to G^{b} , $G^{\#}$ is equal to A^{b} , $A^{\#}$ is equal to B^{b} , B is equal to C^{b} , $B^{\#}$ is equal to C, $E^{\#}$ is equal to F, F^{b} is equal to E
EQ	Equalizer, Equalization.
Fermata	A hold or pause
Forte	Dynamics for Loud or Strong
Glissando	Moving rapidly between pitches.

Grace Note(s)	A note or set of notes played briefly before a following note.
Half Tone or Half Step	Space between to directly adjacent notes. C to C# is a half step, E to F is a half step.
Harmonics	An extra quality to the sound beyond the frequency of the note(s) generated by an instrument.
lambic	In poetry, a short syllable followed by a long syllable.
lament, lamento	A mournful piece.
largo	Slow and broad.
legato	Smooth.
Meter	The number of beats of a fractional value per measure. Common time also designated 4/4 states that there are four quarter notes per measure. Waltz Time also designated as 3/4 specifies that there are three quarter notes per measure. There are many different meters, such as 6/8 or 9/8 or 12/8
Multitimbral	Primarily referring to polyphonic synthesizers that can produce multiple sound patches of different timbre at the same time.
Pad	Slang. A part of an arrangement that produces a soft, sustained background. Can be a single note or chords. Modern – synth pad patches. Early – soft strings. Classic – Hammond organ.
Picking	The direction of picking, strumming or bowing. Can be upstroke or downstroke.
Piano	Dynamics for Soft or Quiet.
Polyphony Polyrhythm	More than one note at a time. Early synthesizers were monophonic, meaning they could only play one note at a time. Contrasting rhythms played simultaneously. In some African music, the rhythm

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	played would be a mix of 4/4 and 3/4 or some more complex rhythmic combination. This type of polyrhythm is a polymetric.
Portamento	To slide continuously from one note to another. This is something that can be done on a fretless string instrument, with a slide on a fretted guitar or with a keyboard that includes a portamento setting.
SAB	Soprano, Alto, Baritone
SATB	Soprano, Alto, Tenor, Bass
Segno	The segno symbol: %
Segue	Follows
Semitone	A half-tone, half-step. e.g.: C to C#, Eb to D, E to F
Solfege, Solfeggio	A way of ear training of the notes in the scales. Do, Re, Mi, Fa, So, La, Ti, Do
Sul	Qualifier to musical directives meaning "at" or "over" or "on the" or "near the". This is used in terms such as Sul Tasto – "at the fingerboard"; Sul Ponticello - "at the bridge"; sulla corda La - "on the A string"; Sul G - "on the G string"; and sulla tastiera - "at the fingerboard".
Tablature	A type of notation developed for fretted string instruments in the 16 th century. Lines indicate strings and numbers indicate frets.
Tempo	Italian terms for the speed in which a piece or section of a piece is played.
Timbre	Pronounced (Tam-bur) The character or quality of a musical sound or voice as distinct from its pitch and intensity. Many instruments including the human voice can play the same pitch note, but they don't sound the same. This difference is the timbre. For example a middle C played on a piano sounds different than a middle C played on a guitar or a brass horn.
Travis Picking	Guitar finger-picking style developed by Merle Travis featuring syncopated

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Tritone	melodic arpeggios over an evenly alternating bass. The interval of an augmented fourth or a diminished fifth. Three whole tones.
Whole Tone	Equals two half steps. The space between two half tones. C to D is a whole step,
or	C# to D# is a whole step, D to E is a whole step, E to F# is a whole step.
Whole Step	

Scales

There are numerous scales in modern music. The predominant scales used in Western music are the Major, Natural Minor, and Harmonic Minor scales.

Major Scale Pattern: W = Whole Step, 1/2 = Half Step



Natural Minor Scale Pattern:



Harmonic Minor Scale Pattern: Same as the Natural Minor, but without the flattened seventh.



Melodic Minor Scale Pattern Ascending and Descending: The Ascending Melodic Minor scale is basically the major scale with a flattened third. The Descending Melodic Minor scale is simply the Natural Minor scale.



Pentatonic Scales

A pentatonic scale is a five note scale.

Name	Base Mode	Degrees	In C	Steps
Major Pentatonic	Ionian	1-2-3-5-6	C-D-E-G-A	W-W-WH-W
Egyptian Sus	Dorian	1-2-4-5- <i>b</i> 7	C-D-F-G-Bb	W-WH-W-WH
Blues Minor	Phrygian	1- <i>b</i> 3-4- <i>b</i> 6- <i>b</i> 7	C-Eb-F-Ab-Bb	WH-W-WH-W
Blues Major	Mixolydian	1-2-4-5-6	C-D-F-G-A	W-WH-W-W
Minor Pentatonic	Aeolian	1-b3-4-5-b7	C-Eb-F-G-Bb	WH-W-W-WH

Modes: Scales Derived From The Major Scale

Mode	1	2	3	4	5	6	7
Ionian	С	D	Е	F	G	А	В
Dorian	D	Е	F	G	А	В	С
Phrygian	Е	F	G	А	В	С	D
Lydian	F	G	А	В	С	D	Е
Mixolydian	G	А	В	С	D	Е	F
Aeolian	А	В	С	D	Е	F	G
Locrian	В	С	D	Е	F	G	А

Blues Scales

The term blues scale refers to several different scales with differing numbers of pitches and related characteristics. A blues scale is often formed by the addition of an out-of-key "blue note" to an existing scale, notably the flat fifth addition to the minor pentatonic scale. However, the heptatonic blues scale can be considered a major scale with altered intervals.

Hexatonic

The hexatonic, or six-note, blues scale consists of the minor pentatonic scale plus the b5th degree of the original heptatonic scale. This added note can be spelled as either a b5 or a #4.

Notes in C: C Eb F F# G Bb C

A major feature of the blues scale is the use of **blue notes**, notes that are played or sung microtonally, at a slightly higher or lower pitch than standard. However, since blue notes are considered alternative inflections, a blues scale may be considered to not fit the traditional definition of a scale. At its most basic, a single version of this blues scale is commonly used over all changes (or chords) in a twelve bar blues progression. Likewise, in contemporary jazz theory, its use is commonly based upon the key rather than the individual chord. The evolution of this scale may be traced back to Asia (pentatonic major) through native North America (pentatonic minor) with the addition of the flat-5 blue note (slave trade/Africa).

Greenblatt defines two blues scales, the major and the minor. The major blues scale is **1**, **2**, **b3**, **3**, **5**, **6** and the minor is **1**, **b3**, **4**, **b5**, **5**, **b7**. The latter is the same as the hexatonic scale described above.

In the Movable do solfège, the hexatonic major blues scale is solmized as "**do - re - me - mi - sol - la**"; In the La-based minor movable do solfège, the hexatonic minor blues scale is solmized as "**la - do - re - me - mi - sol**".

Heptatonic Scale

A heptatonic scale is a musical scale that has seven pitches, or tones, per octave. Examples include the major scale or minor scale; e.g., in C major: C D E F G A B C—and in the relative minor, A minor, natural minor: A B C D E F G A; the melodic minor scale, A B C D E F# G# A ascending, A G F E D C B A descending; the harmonic minor scale, A B C D E F G# A; and a scale variously known as the Byzantine, and Hungarian, scale, C D Eb F# G Ab B C. Indian classical theory postulates seventy-two seven-tone scale types, collectively called that, whereas others postulate twelve or ten (depending on the theorist) seven-tone scale types.

Several heptatonic scales in Western, Roman, Spanish, Hungarian, and Greek music can be analyzed as juxtapositions of tetrachords. All heptatonic scales have all intervals present in their interval vector analysis, and thus all heptatonic scales are both hemitonic and tritonic. There is a special affinity for heptatonic scales in the Western key signature system.

Heptatonic Blues Scale

The heptatonic, or seven-note, conception of the blues scale is as a diatonic scale (a major scale) with lowered third, fifth, and seventh degrees, which is equivalent to the dorian b5 scale, the second mode of the harmonic major scale. Blues practice is derived from the "conjunction of 'African scales' and the diatonic western scales".

Notes in C: C D Eb F Gb A Bb C

Minor Pentatonic Scale

Although various hemitonic pentatonic scales might be called minor, the term is most commonly applied to the relative minor pentatonic derived from the major pentatonic, using scale tones 1, 3, 4, 5, and 7 of the natural minor scale. (It may also be considered a gapped blues scale.) The C minor pentatonic scale, the relative of the E-flat pentatonic scale is C, E-flat, F, G, B-flat. The A minor pentatonic, the relative minor of C pentatonic, comprises the same tones as the C major pentatonic, starting on A, giving A, C, D, E, G. This minor pentatonic contains all three tones of an A minor triad.

Nonatonic Scale

An essentially nine-note blues scale is defined by Benward and Saker as a chromatic variation of the major scale featuring a flat third and seventh degrees (in effect substitutions from Dorian mode) which, "alternating with the normal third and seventh scale degrees are used to create the blues inflection. These 'blue notes' represent the influence of African scales on this music".

Notes in C: C D Eb E F G A Bb B C

A different and non-formal way of playing the scale is by the use of quarter tones, added to the 3rd and 7th degrees of the minor blues scale. For example, the A minor blues scale with quarter tones is A-B-C half sharp $-D-E-F \ddagger -G$ half sharp, where half sharp is a half sharp. Also, the note $D \ddagger$ can be used as an additional note. Guitar players can raise a given note by a quarter tone through bending.

Usage

In jazz, the blues scale is used by improvising musicians in a variety of harmonic contexts. It can be played for the entire duration of a twelve bar blues progression constructed off the root of the first dominant seventh chord. For example, a C hexatonic blues scale could be used to improvise a solo over a C blues chord progression. The blues scale can also be used to improvise over a minor chord. Jazz educator Jamey Aebersold describes the sound and feel of the blues scale as "funky," "down-home," "earthy," or "bluesy."

Extended Chords

Extended chords, with the exception of a sixth, are built upon a dominant seventh or a major seventh. If it is not specified as being a major chord, it is assumed to be a dominant seventh. So for example if the chord is listed as a D9, it's built upon a D dominant seventh, if it's listed as DM9, it's built upon a D major seventh. Something else to note is the chords beyond the 9th, may also include the 9th note. So for example a D11 may or may not include the ninth. Note that as we move through a scale beyond an octave that certain notes are skipped over. This is because they already exist in the base chord. For example 8 is the same as the root, 10 is the same as the third, 12 is the same as the 5th and 14 is the same as the 7th. So that leaves us with 9, 11 and 13. The following are the most common extended chords. With each added note, the number of potential variations increase. For example a major triad has at least ten variations besides itself with two modifiable notes, the third and the fifth. The variations, including itself, being: major, minor, sus2, sus4, dim 5th, augmented, diminished, minor augmented, sus2 diminished 5th, sus4 diminished 5th. So for each of the chords below, there may be many options beyond the base chord. An example might be C9+ where the fifth is raised by a half-step. The note of the chord being **C, E, Ab, Bb, D**

Sixth

A 6th is a triad that has an added note that is a sixth above the root. In the case of **C6** the added note is A. So the chord is: **C**, **E**, **G**, **A**. The chord **Cm6** is **C**, **Eb**, **G**, **A**.

Ninth

A 9th is a triad that has an added note that is a ninth above the root. In the case of C9 the added note is D. So the chord is: **C**, **E**, **G**, **Bb**, **D**

Eleventh

An eleventh is a dominant seventh with an added eleventh. In the case of C11 the added note is F. So the chord is: C, E, G, Bb, F. There may also be a 9th, as in C, E, G, Bb, D, F

Thirteenth

A thirteenth is a dominant seventh with an added thirteenth. In the case of C13 the added note is A. So the chord is: **C**, **E**, **G**, **Bb**, **A**. There may also be a 9th and or an 11th included in the chord. **C**, **E**, **G**, **Bb**, **A** or **C**, **E**, **G**, **Bb**, **D**, **A** or **C**, **E**, **G**, **Bb**, **F**, **A** or **C**, **E**, **G**, **Bb**, **D**, **F**, **A**

Secondary Chord

A secondary chord is an analytical label for a specific harmonic device that is prevalent in the tonal idiom of Western music beginning in the common practice period: the use of diatonic functions for tonicization.

Secondary chords are a type of altered or borrowed chord, chords that are not part of the music piece's key. They are the most common sort of altered chord in tonal music. Secondary chords are referred to by the function they have and the key or chord in which they function. Conventionally, they are written with the notation "**function/key**". Thus, the most common secondary chord, the dominant of the dominant, is written "V/V" and read as "five of five" or "the dominant of the dominant". The major or minor triad on any diatonic scale degree may have any secondary function applied to it; secondary functions may even be applied to diminished triads in some special circumstances.

Secondary chords were not used until the Baroque period and are found more frequently and freely in the Classical period, even more so in the Romantic period. Composers began to use them less frequently with the breakdown of conventional harmony in modern classical music—but secondary dominants are a cornerstone of popular music and jazz in the 20th century.

Secondary Dominant

The term secondary dominant (also applied dominant, artificial dominant, or borrowed dominant) refers to a major triad or dominant seventh chord built and set to resolve to a scale degree other than the tonic, with the dominant of the dominant (written as V/V or V of V) being the most frequently encountered. The chord that the secondary dominant is the dominant of is said to be a temporarily tonicized chord. The secondary dominant is normally, though not always, followed by the tonicized chord. Tonicizations that last longer than a phrase are generally regarded as modulations to a new key (or new tonic).

According to music theorists David Beach and Ryan C. McClelland, "the purpose of the secondary dominant is to place emphasis on a chord within the diatonic progression." The secondary-dominant terminology is still usually applied even if the chord resolution is nonfunctional. For example, the V/ii label is still used even if the V/ii chord is not followed by ii.

Definition

The major scale contains seven basic chords, which are named with Roman numeral analysis in ascending order. Because tonic triads are either major or minor, one would not expect to find diminished chords (either the viio in major or the iio in minor) tonicized by a secondary dominant. It would also not make sense for the tonic of the key itself to be tonicized.

In the key of C major, the five remaining chords are:

ii	iii	IV	V	vi
Dm	Em	F	G	Am

Of these chords, the V chord (G major) is said to be the dominant of C major. However, each of the chords from ii to vi also has its own dominant. For example, V (G major) has a D major triad as its dominant. These extra dominant chords are not part of the key of C major as such because they include notes that are not part of the C major scale. Instead, they are secondary dominants.

The notation below shows the secondary-dominant chords for C major. Each chord is accompanied by its standard number in harmonic notation. In this notation, a secondary dominant is usually labeled with the formula "V of ..." (dominant chord of); thus "V of ii" stands for the dominant of the ii chord, "V of iii" for the dominant of iii, and so on. A shorter notation, used below, is "V/ii", "V/iii", etc.

ii	iii	IV	V	vi
Dm	Em	F	G	Am
V/ii	V/iii	V/VI	V/V	V/vi
A	В	С	D	Е

I	D	E	F	G	Α
ii	Em	F#m	Gm	Am	Bm
=	F#m	G#m	Am	Bm	C#m
IV	G	А	Bb	С	D
V	Α	В	С	D	E
vi	Bm	C#m	Dm	Em	F#m

In Jazz And Popular Music

In jazz harmony, a secondary dominant is any dominant seventh chord on a weak beat and resolves downward by a perfect fifth. Thus, a chord is a secondary dominant when it functions as the dominant of some harmonic element other than the key's tonic and resolves to that element. This is slightly different from the traditional use of the term, where a secondary dominant does not have to be a seventh chord, occur on a weak beat, or resolve downward. If a non-diatonic dominant chord is used on a strong beat, it is considered an extended dominant. If it doesn't resolve downward, it may be a borrowed chord.

Bebop Cliché Arpeggio

Upwards from the third to the ninth of A7b9, which is the secondary dominant of D minor, the ii chord in the key of C (V/ii). The ii note in C is D. The V note of D is A.

Key Deg	ree	I		i	i		iii			IV		V		vi
Key of C	:	С		[D		Е			F		G		A
Key of D	:	D		E	Ξ		F#			G		А		В
	1	3	5	7	,	b9								
A7b9	A	C#	Е	C	3	Bb								
D in Ch	5			7		5		3	5	7	b9		1	
D in C	3	4		5	4	3	2		3	5			6	
Arp	Е	F	F#	G	F	Е	D	C#	Е	G	Bb		А	
Notes	Q	Е	Е	Е	Е	Е	Е	Е	Е	Е	Е	Er	Q	

Chord Progression: I'd Like To Teach The World To Sing. The V chord in F is C. The V chord of C is G.

I	V/V	V	IV	V
F	G7	С	Bb	С

Secondary dominants are used in jazz harmony in the bebop blues and other blues progression variations, as are substitute dominants and turnarounds. In some jazz tunes, all or almost all of the chords that are used are dominant chords. For example, in the standard jazz chord progression ii–V–I, which would normally be Dm–G7–C in the key of C major, some tunes will use D7–G7–C7. Since jazz tunes are often based on the circle of fifths, this creates long sequences of secondary dominants.

Secondary dominants are also used in popular music. Examples include II7 (V7/V) in Bob Dylan's "Don't Think Twice, It's All Right" and III7 (V7/vi) in Betty Everett's "The Shoop Shoop Song (It's in His Kiss)". "Five Foot Two, Eyes of Blue" features chains of secondary dominants. "Sweet Georgia Brown" opens with V/V/V–V/V–V–I.

Extended Dominant

An extended dominant chord is a secondary dominant seventh chord that resolves down by a fifth to another dominant seventh chord. A series of extended dominant chords continues to resolve downwards by the circle of fifths until it reaches the tonic chord. The most common extended dominant chord is the tertiary dominant, which resolves to a secondary dominant. For example, V/V/V (in C major, A(7)) resolves to V/V (D(7)), which resolves to V (G(7)), which resolves to I. Note that V/V/V is the same chord as V/ii, but differs in its resolution to a major dominant rather than a minor chord.

Quaternary dominants are rarer, but an example is the bridge section of the rhythm changes, which starts from V/V/V/V (in C major, E(7)). The example below from Chopin's Polonaises, Op. 26, No. 1 (1835) has a quaternary dominant in the second beat (V/ii = V/V/V, V/vi = V/V/V/V).

Secondary Leading-Tone

In music theory, a secondary leading-tone chord or secondary diminished seventh (as in seventh scale degree or leading-tone, not necessarily seventh chord) is a secondary chord that is the leading-tone triad or seventh chord of the tonicized chord, rather than its dominant. In contrast to secondary dominant chords, these chords resolve up a half step. Fully diminished seventh chords are more common than half-diminished seventh chords and one may also find diminished triads (without sevenths).

Secondary leading-tone chords may resolve to either a major or minor diatonic triad:

In major keys	ii	iii	IV	V	vi
In minor keys		Ш	iv	V	VI

The type of diminished seventh chord is typically related to the type of tonicized triad:

If the tonicized triad is minor, the leading-tone chord is fully diminished seventh chord.

If it is major, the leading-tone chord may be either half-diminished or fully diminished, though fully diminished chords are used more often.

Especially in four-part writing, the seventh should resolve downwards by step and if possible the lower tritone should resolve appropriately, inwards if a diminished fifth and outwards if an augmented fourth, as the example below shows.

Some Progressions

Key of F:

IM7	viio7/ii	ii7	viio7/iii	iii7
FM7	F#dim7	Gm7	G#07	Am7

Tritones

In music theory, the tritone is defined as a musical interval composed of three adjacent whole tones (six semitones). For instance, the interval from F up to the B above it (in short, F–B) is a tritone as it can be decomposed into the three adjacent whole tones F–G, G–A, and A–B. According to this definition, within a diatonic scale there is only one tritone for each octave. For instance, the above-mentioned interval F–B is the only tritone formed from the notes of the C major scale. A tritone is also commonly defined as an interval spanning six semitones. According to this definition, a diatonic scale contains two tritones for each octave. For instance, the above-mentioned C major scale contains the tritones F–B (from F to the B above it, also called augmented fourth) and B–F (from B to the F above it, also called diminished fifth, semidiapente, or semitritonus). In twelve-equal temperament, the tritone divides the octave exactly in half as 6 of 12 semitones or 600 of 1,200 cents.

In classical music, the tritone is a harmonic and melodic dissonance and is important in the study of musical harmony. The tritone can be used to avoid traditional tonality: "Any tendency for a tonality to emerge may be avoided by introducing a note three whole tones distant from the key note of that tonality." The tritone found in the dominant seventh chord can also drive the piece of music towards resolution with its tonic. These various uses exhibit the flexibility, ubiquity, and distinctness of the tritone in music.

The condition of having tritones is called tritonia; that of having no tritones is atritonia. A musical scale or chord containing tritones is called tritonic; one without tritones is atritonic.

Leading-Tone

In music theory, a leading-tone (also subsemitone, and called the leading-note in the UK) is a note or pitch which resolves or "leads" to a note one semitone higher or lower, being a lower and upper leading-tone, respectively. Typically, the leading tone refers to the seventh scale degree of a major scale (scale degree 7), a major seventh above the tonic. In the movable do solfège system, the leading-tone is sung as ti.

A leading-tone triad is a triad built on the seventh scale degree in a major key (viio in Roman numeral analysis), while a leading-tone seventh chord is a seventh chord built on the seventh scale degree (vii7b5).

Passing Chord

In music, a passing chord is a chord that connects, or passes between, the notes of two diatonic chords. Any chord that moves between one diatonic chord and another one nearby may be loosely termed a passing chord. A diatonic passing chord may be inserted into a pre-existing progression that moves by a major or minor third in order to create more movement. In between chords that help you get from one chord to another are called passing chords. For example, in the simple chord progression in the key of C Major, which goes from:

IM7	iii7	ii7	V7
Cmaj7	Em7	Dm7	G7

The diatonic (this means "from the scale of the tonic") passing chord (Dm7) may be inserted:

IM7	ii7	iii7	ii7	V7
Cmaj7	Dm7	Em7	Dm7	G7

Or the chromatic passing chord (Ebm7) may be inserted:

IM7	iii7	biii7	ii7	V7
Cmaj7	Em7	Ebm7	Dm7	G7

Or one or more secondary dominants may be inserted: In this example, the B7 is the secondary dominant of Em7 and the A7 is the secondary dominant of Dm7

IM7	V/iii	iii	V/ii	ii	۷
Cmaj7	B7	Em7	A7	Dm7	G7

A chromatic passing chord is, "a chord that is not in the harmonized scale" For example, one or more diminished seventh chords may be inserted:

IM7	viio7/iii	iii	viio7/ii	ii7	V7
Cmaj7	D#dim7	Em7	C#dim7	Dm7	G7

In the previous example, the D# dim7 is the viio7 of Em7 and the C# dim7 is the viio7 of Dm7. Passing chords may be consonant or dissonant and may include flat fifth substitution, scalewise substitution, dominant minor substitution, approach chords, and bass-line-directed substitution. Passing chords may be written into a lead sheet by a composer, songwriter, or arranger. As well, particularly in smaller ensembles, such as the organ trio or jazz quartet, the comping (chord-playing) rhythm section instrumentalists (e.g., jazz guitar, jazz piano, Hammond organ) may improvise passing chords. With large ensembles, such as a big band, the comping players may have less freedom to improvise passing chords, because the composer/arranger may have already written in passing chords into the written horn parts, which might clash with improvised passing chords played by a comping musician. The freedom of comping musicians to improvise passing chords also depends on the tempo. In a very slow ballad, if a chord-playing musician adds in an improvised diminished chord for a half a bar, this may "clash" with the melody notes or chords played by other performers. On the other hand, in an extremely up-tempo (fast) bebop tune, a comping musician could add improvised passing chords with more freedom, because each bar goes by so fast.

Musical Counterpoint

In music, counterpoint is the relationship between two or more musical lines (or voices) which are harmonically interdependent yet independent in rhythm and melodic contour. It has been most commonly identified in the European classical tradition, strongly developing during the Renaissance and in much of the common practice period, especially in the Baroque period. The term originates from the Latin punctus contra punctum meaning "point against point", i.e. "note against note".

There are several different forms of counterpoint, including imitative counterpoint and free counterpoint. Imitative counterpoint involves the repetition of a main melodic idea across different vocal parts, with or without variation. Compositions written in free counterpoint often incorporate non-traditional harmonies and chords, chromaticism and dissonance.

General Principles of Counterpoint

The term "counterpoint" has been used to designate a voice or even an entire composition. Counterpoint focuses on melodic interaction—only secondarily on the harmonies produced by that interaction. In the words of John Rahn:

It is hard to write a beautiful song. It is harder to write several individually beautiful songs that, when sung simultaneously, sound as a more beautiful polyphonic whole. The internal structures that create each of the voices separately must contribute to the emergent structure of the polyphony, which in turn must reinforce and comment on the structures of the individual voices. The way that is accomplished in detail is ... 'counterpoint'.

Work initiated by Guerino Mazzola (born 1947) has given counterpoint theory a mathematical foundation. In particular, Mazzola's model gives a structural (and not psychological) foundation of forbidden parallels of fifths and the dissonant fourth. Octavio Agustin has extended the model to microtonal contexts.

In counterpoint, the functional independence of voices is the prime concern. The violation of this principle leads to special effects, which are avoided in counterpoint. In organ registers, certain interval combinations and chords are activated by a single key so that playing a melody results in parallel voice leading. These voices, losing independence, are fused into one and the parallel chords are perceived as single tones with a new timbre. This effect is also used in orchestral arrangements; for instance, in Ravel's Bolero #5 the parallel parts of flutes, horn and celesta resemble the sound of an electric organ. In counterpoint, parallel voices are prohibited because they violate the homogeneity of musical texture when independent voices occasionally disappear turning into a new timbre quality and vice versa.

Development of Counterpoint

Some examples of related compositional techniques include: the round (familiar in folk traditions), the canon, and perhaps the most complex contrapuntal convention: the fugue. All of these are examples of imitative counterpoint.

Species Counterpoint

Species counterpoint was developed as a pedagogical tool in which students progress through several "species" of increasing complexity, with a very simple part that remains constant known as the cantus firmus (Latin for "fixed melody"). Species counterpoint generally offers less freedom to the composer than other types of counterpoint and therefore is called a "strict" counterpoint. The student gradually attains the ability to write free counterpoint (that is, less rigorously constrained counterpoint, usually without a cantus firmus) according to the given rules at the time. The idea is at least as old as 1532, when Giovanni Maria Lanfranco described a similar concept in his Scintille di musica (Brescia, 1533). The 16th-century Venetian theorist Zarlino elaborated on the idea in his influential Le institutioni harmoniche, and it was first presented in a codified form in 1619 by Lodovico Zacconi in his Prattica di musica. Zacconi, unlike later theorists, included a few extra contrapuntal techniques, such as invertible counterpoint. In 1725 Johann Joseph Fux published Gradus ad Parnassum (Steps to Parnassus), in which he described five species:

- 1. Note against note;
- 2. Two notes against one;
- 3. Four notes against one;
- 4. Notes offset against each other (as suspensions);
- 5. All the first four species together, as "florid" counterpoint.

A succession of later theorists quite closely imitated Fux's seminal work, often with some small and idiosyncratic modifications in the rules. Many of Fux's rules concerning the purely linear construction of melodies have their origin in solfeggi. Concerning the common practice era, alterations to the melodic rules were introduced to enable the function of certain harmonic forms. The combination of these melodies produced the basic harmonic structure, the figured bass.

Considerations For All Species

The following rules apply to melodic writing in each species, for each part:

- 2. Permitted melodic intervals are the perfect unison, fourth, fifth, and octave, as well as the major and minor second, major and minor third, and ascending minor sixth. The ascending minor sixth must be immediately followed by motion downwards.
- 3. If writing two skips in the same direction—something that must be only rarely done—the second must be smaller than the first, and the interval between the first and the third note may not be dissonant. The three notes should be from the same triad; if this is impossible, they should not outline more than one octave. In general, do not write more than two skips in the same direction.
- 4. If writing a skip in one direction, it is best to proceed after the skip with step-wise motion in the other direction.
- 5. The interval of a tritone in three notes should be avoided (for example, an ascending melodic motion F–A–B) as is the interval of a seventh in three notes.
- 6. There must be a climax or high point in the line countering the cantus firmus. This usually occurs somewhere in the middle of exercise and must occur on a strong beat.
- 7. An outlining of a seventh is avoided within a single line moving in the same direction.

And, in all species, the following rules govern the combination of the parts:

- 1. The counterpoint must begin and end on a perfect consonance.
- 2. Contrary motion should dominate.
- 3. Perfect consonances must be approached by oblique or contrary motion.
- 4. Imperfect consonances may be approached by any type of motion.
- 5. The interval of a tenth should not be exceeded between two adjacent parts unless by necessity.
- 6. Build from the bass, upward.

First Species

In first species counterpoint, each note in every added part (parts being also referred to as lines or voices) sounds against one note in the cantus firmus. Notes in all parts are sounded simultaneously, and move against each other simultaneously. Since all notes in First species counterpoint are whole notes, rhythmic independence is not available. In the present context, a "step" is a melodic interval of a half or whole step. A "skip" is an interval of a third or fourth. An interval of a fifth or larger is referred to as a "leap".

A few further rules given by Fux, by study of the Palestrina style, and usually given in the works of later counterpoint pedagogues, are as follows.

- 1. Begin and end on either the unison, octave, or fifth, unless the added part is underneath, in which case begin and end only on unison or octave.
- 2. Use no unisons except at the beginning or end.
- Avoid parallel fifths or octaves between any two parts; and avoid "hidden" parallel fifths or octaves: that is, movement by similar motion to a perfect fifth or octave, unless one part (sometimes restricted to the higher of the parts) moves by step.
- 4. Avoid moving in parallel fourths. (In practice Palestrina and others frequently allowed themselves such progressions, especially if they do not involve the lowest of the parts.)
- 5. Do not use an interval more than three times in a row.
- 6. Attempt to use up to three parallel thirds or sixths in a row.
- 7. Attempt to keep any two adjacent parts within a tenth of each other, unless an exceptionally pleasing line can be written by moving outside that range.
- 8. Avoid having any two parts move in the same direction by skip.
- 9. Attempt to have as much contrary motion as possible.
- 10. Avoid dissonant intervals between any two parts: major or minor second, major or minor seventh, any augmented or diminished interval, and perfect fourth (in many contexts).

In the adjacent example in two parts, the cantus firmus is the lower part. (The same cantus firmus is used for later examples also. Each is in the Dorian mode.)

First Species	D	А	В	D	C#	D	
Cantus Firmus	D	F	G	F	Е	D	



Second Species

In second species counterpoint, two notes in each of the added parts work against each longer note in the given part. Additional considerations in second species counterpoint are as follows, and are in addition to the considerations for first species:

- 1. It is permissible to begin on an upbeat, leaving a half-rest in the added voice.
- 2. The accented beat must have only consonance (perfect or imperfect). The unaccented beat may have dissonance, but only as a passing tone, i.e. it must be approached and left by step in the same direction.
- 3. Avoid the interval of the unison except at the beginning or end of the example, except that it may occur on the unaccented portion of the bar.
- 4. Use caution with successive accented perfect fifths or octaves. They must not be used as part of a sequential pattern. The example show is weak due to similar motion in the second measure in both voices. A good rule to follow: if one voice skips or jumps try to use step-wise motion in the other voice or at the very least contrary motion.



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both voices. A good rule to follow: if one voice skips or jumps try to use step-wise motion in the other voice or at the very least contrary motion.



Third Species

In third species counterpoint, four (or three, etc.) notes move against each longer note in the given part.

Three special figures are introduced into third species and later added to fifth species, and ultimately outside the restrictions of species writing. There are three figures to consider: The nota cambiata, double neighbor tones, and double passing tones.

Double neighbor tones: the figure is prolonged over four beats and allows special dissonances. The upper and lower tones are prepared on beat 1 and resolved on beat 4. The fifth note or downbeat of the next measure should move by step in the same direction as the last two notes of the double neighbor figure. Lastly a double passing tone allows two dissonant passing tones in a row. The figure would consist of 4 notes moving in the same direction by step. The two notes that allow dissonance would be beat 2 and 3 or 3 and 4. The dissonant interval of a fourth would proceed into a diminished fifth and the next note would resolve at the interval of a sixth.

Fourth Species

In fourth species counterpoint, some notes are sustained or suspended in an added part while notes move against them in the given part, often creating a dissonance on the beat, followed by the suspended note then changing (and "catching up") to create a subsequent consonance with the note in the given part as it continues to sound. As before, fourth species counterpoint is called expanded when the added-part notes vary in length among themselves. The technique requires chains of notes sustained across the boundaries determined by beat, and so creates syncopation. Also it is important to note that a dissonant interval is allowed on beat 1 because of the syncopation created by the suspension. While it is not incorrect to start with a half note, it is also common to start 4th species with a half rest.



Fifth Species (florid counterpoint)

In fifth species counterpoint, sometimes called florid counterpoint, the other four species of counterpoint are combined within the added parts. In the example, the first and second bars are second species, the third bar is third species, the fourth and fifth bars are third and embellished fourth species, and the final bar is first species. In florid counterpoint it is important that no one species dominates the composition.



Contrapuntal Derivations

Since the Renaissance period in European music, much contrapuntal music has been written in imitative counterpoint. In imitative counterpoint, two or more voices enter at different times, and (especially when entering) each voice repeats some version of the same melodic element. The fantasia, the ricercar, and later, the canon and fugue (the contrapuntal form par excellence) all feature imitative counterpoint, which also frequently appears in choral works such as motets and madrigals. Imitative counterpoint spawned a number of devices, including:

Melodic Inversion

The inverse of a given fragment of melody is the fragment turned upside down—so if the original fragment has a rising major third (see interval), the inverted fragment has a falling major (or perhaps minor) third, etc. (Compare, in twelve-tone technique, the inversion of the tone row, which is the so-called prime series turned upside down.) (Note: in invertible counterpoint, including double and triple counterpoint, the term inversion is used in a different sense altogether. At least one pair of parts is switched, so that the one that was higher becomes lower. See Inversion in counterpoint; it is not a kind of imitation, but a rearrangement of the parts.)

Retrograde

Whereby an imitative voice sounds the melody backwards in relation to the leading voice.

Retrograde Inversion

Where the imitative voice sounds the melody backwards and upside-down at once.

Augmentation

When in one of the parts in imitative counterpoint the note values are extended in duration compared to the rate at which they were sounded when introduced.

Diminution

When in one of the parts in imitative counterpoint the note values are reduced in duration compared to the rate at which they were sounded when introduced.

Free counterpoint

Broadly speaking, due to the development of harmony, from the Baroque period on, most contrapuntal compositions were written in the style of free counterpoint. This means that the general focus of the composer had shifted away from how the intervals of added melodies related to a cantus firmus, and more toward how they related to each other.

Nonetheless, according to Kent Kennan: "....actual teaching in that fashion (free counterpoint) did not become widespread until the late nineteenth century."[19] Young composers of the eighteenth and nineteenth centuries, such as Mozart, Beethoven, and Schumann, were still educated in the style of "strict" counterpoint, but in practice, they would look for ways to expand on the traditional concepts of the subject.

Main features of free counterpoint:

- 1. All forbidden chords, such as second-inversion, seventh, ninth etc., can be used freely in principle of harmony.
- 2. Chromaticism is allowed
- 3. The restrictions about rhythmic-placement of dissonance are removed. It is possible to use passing tones on the accented beat.
- 4. Appoggiatura is available: dissonance tones can be approached by leaps.

Linear counterpoint

Linear counterpoint is "a purely horizontal technique in which the integrity of the individual melodic lines is not sacrificed to harmonic considerations. "Its distinctive feature is rather the concept of melody, which served as the starting-point for the adherents of the 'new objectivity' when they set up linear counterpoint as an anti-type to the Romantic harmony." The voice parts move freely, irrespective of the effects their combined motions may create." In other words, either "the domination of the horizontal (linear) aspects over the vertical" is featured or the "harmonic control of lines is rejected."

Associated with neoclassicism, the technique was first used in Igor Stravinsky's Octet (1923), inspired by J. S. Bach and Giovanni Palestrina. However, according to Knud Jeppesen: "Bach's and Palestrina's points of departure are antipodal. Palestrina starts out from lines and arrives at chords; Bach's music grows out of an ideally harmonic background, against which the voices develop with a bold independence that is often breath-taking."

According to Cunningham, linear harmony is "a frequent approach in the 20th century...[in which lines] are combined with almost careless abandon in the hopes that new 'chords' and 'progressions'...will result." It is possible with "any kind of line, diatonic or duodecuple".

Dissonant Counterpoint

Dissonant counterpoint was originally theorized by Charles Seeger as "at first purely a school-room discipline," consisting of species counterpoint but with all the traditional rules reversed. First species counterpoint must be all dissonances, establishing "dissonance, rather than consonance, as the rule," and consonances are "resolved" through a skip, not step. He wrote that "the effect of this discipline" was "one of purification". Other aspects of composition, such as rhythm, could be "dissonated" by applying the same principle.

Turnaround

In jazz, a turnaround is a passage at the end of a section which leads to the next section. This next section is most often the repetition of the previous section or the entire piece or song. The turnaround may lead back to this section either harmonically, as a chord progression, or melodically.

Typical Examples

Typical turnarounds in jazz include:I - vi - ii - V(ii–V–l turnaround, circle progression)I - VI - ii - V(I–V/ii–V/V–V)I - VI - II - V(I–V/ii–V/V–V)I - bilio - ii7 - V7(I–vi - bVI7#11 - VV - IV - I(blues turnaround)I - bIII - bVI - bII7(Tadd Dameron turnaround)iii - VI - ii - V

Turnarounds typically begin with the tonic (I) (or a tonic substitute such as iii) and end on the dominant (V7), the next section starting on the tonic (I). They may also end on blI7 (which is a dominant substitute). Thus when used in a twelve bar blues pattern, the twelfth bar may end on the dominant. All of the chords in a turnaround may be seventh chords, typically dominant seventh chords for major chords and minor seventh chords for minor chords (e.g., ii7).

Harmonic Alternatives

Sometimes, especially in blues music, musicians will take chords which are normally minor chords and make them major. The most popular example is the I - VI - ii - V - I progression; normally, the vi chord would be a minor chord (or **m7**, **m6**, **mb6** etc.) but here the major third makes it a secondary dominant leading to ii, i.e. V/ii. Take the example in C major: C - A - Dm - G(7). The third of the VI chord (in this case, C#) allows for chromatic movement from C (the root of I) to C# (the third of VI) to D (the root of ii).

Similar chromaticism and harmonic interest can be achieved by the use of a secondary dominant of V, for example V7/V - V7 - I (that is, II7 - V7 - I), instead of ii - V - I. Another popular turnaround which may be considered as a secondary dominant analysis is ii - bV/V - I (i.e. ii - bII - I), which is a variation on the standard ii - V - I turnaround. In jazz parlance, use of the bII instead of the V is known as tritone substitution. Using bV/V instead of V allows for a smooth chromatic descent. Again, let us examine C major; the original turnaround would be Dm - G(7) - C, while the modified would be Dm - Db - C. The obvious chromatic movement is thorough; it is apparent in the roots (D - Db - C), thirds (F - F - E; F is often used as a**pedal tone**), and fifths <math>(A - Ab - G).

While in that particular example the **bV/V** can be considered a Neapolitan chord, the more typical functional analysis in the context of the jazz idiom is that it is not a secondary dominant (**bV7/V**) but **blI7**, a substitute dominant (**tritone substitution**). Harmonically, **blI7** functions exactly as **V7/I** does, because the two chords enharmonically contain the same tritone, which is the critical harmonic element in the resolution from dominant to tonic. The half step downward motion of the roots of those chords, as seen in **ii – blI7 – I**, forms the familiar line cliché, arriving satisfyingly at the tonic.

Secondary dominant refers to the functional dominant of the key's dominant or another non-tonic chord, while substitute dominant refers to an alternative functional dominant of the key's tonic. The extending of dominants to secondaries (or beyond) is a practice which remains firmly inside the circle of fifths, while the substitution of dominants replaces that cycle with one of minor-second intervals.

I - vi - ii - V may be transformed through various chord substitutions. For example, the vi and ii chords may be substituted with dominant chords, giving I - VI7 - II7 - V or C - A7 - D7 - G, the ragtime progression. The tritone substitution may be applied to the vi and V chords, giving C - Eb7 - D7 - Db7, or to every chord but the I, giving C - Eb7 - AbM7 - Db7.
The Circle Of Fifths

Here's how it works. If I construct a circle like a clock and I start at the top with C and moving clockwise I set the numbers of the clock with the key that is a perfect fifth (A perfect fifth being 3 whole tones and a half tone apart or 7 half tones apart) above the previous note until I get to C#. I will get the following diagram:



Series of perfect fifths

The above illustration shows how to build the circle from C to A. If you continue on you will get the diagram at the right:

The Circle of 5ths



The Circle of 5ths



Next I go back to the top of the clock and I work my way down the other side counter-clockwise moving a perfect fifth in the other direction until I reach Cflat.

Note: I have removed what was done in the previous step for clarity. In the next step you will see the whole diagram as it should look.



Series of perfect fifths

The Circle of 5ths



From this diagram you can determine:

- Key signatures and which notes are modified
- All the chords in the key and their type
- Chord progressions
- Relative Keys

Key Signatures



Look at the Circle Of Fifths as if it were a clock.

The 12 o'clock position is C and it has zero sharps or flats.

The 1 o'clock position is G and it has 1 sharp. The 2 o'clock position is D and it has 2 sharps. The 3 o'clock position is A and it has 3 sharps. The 4 o'clock position is A and it has 4 sharps. The 5 o'clock position is A and it has 5 sharps. The 6 o'clock position is A and it has 6 sharps.

Going the other direction from 12 o'clock are the flat keys.

The 11 o'clock position is F and it has 1 flat. The 10 o'clock position is Bb and it has 2 flats. The 9 o'clock position is Bb and it has 3 flats. The 8 o'clock position is Ab and it has 4 flats. The 7 o'clock position is Db and it has 5 flats. The 6 o'clock position is Gb and it has 6 flats.

Chords In The Key

One of the coolest things about the circle of fifths diagram is you can instantly tell what every chord is in every key just by looking at its relationship to the root note.

In this illustration roman numerals show the degree and chord type within the key of C. This pattern repeats around the wheel, so all you have to do is find the key and then locate by position all of the relative chords.



	Clock Position	Chord in Key	Root Name	Position & Direction From Root
I	12:00	С	Tonic or Root	Root Position
ii	2:00	Dm	Supertonic	2 positions clockwise
iii	4:00	Em	Mediant	4 positions clockwise
IV	11:00	F	Subdominant	1 position counter-clockwise
V	1:00	G	Dominant	1 position clockwise
vi	3:00	Am	Submediant	3 positions clockwise
vii°	5:00	Bdim	Leading Note	5 positions clockwise

If you apply this pattern to any chosen root note you can figure out all of the other notes and chords in the key.

Chord Progressions From The Circle Of 5ths

First you can develop chord progressions from within the key. Also you can take advantage of the fact that each note going right (clockwise) is a perfect fifth apart and going left (counter clockwise) is a perfect fourth. Knowing that the dominant seventh wants to resolve to a fourth below you can just work your way around the wheel going from dominant seventh to dominant seventh until you reach your destination. For example if I am in the key of A and I want to change to the key of C, I can create a dominant seventh progression to get me there. A7 wants to resolve to D, D7 wants to resolve to G, G7 wants to resolve to C and we've reached our destination.

Relative Keys From The Circle Of 5ths

One thing to note is that the keys surrounding a key are very close to the selected key. For example if you look at the key of C. The keys directly to the left and right are only off by one note from the key of C. C has no sharps or flats. G has one sharp, F has one flat. The same holds true around the wheel. Any selected key will differ by one note relative to the adjacent keys to the left and the right of it.

Chord Progressions

Three-chord progressions

Three-chord progression are more common since a melody may then dwell on any note of the scale. They are often presented as successions of four chords (as shown below), in order to produce a binary harmonic rhythm. Here are the four bar permutations of the three chords C, F and G, where the starting chord must be the root chord and the remaining chords may or may not contain the root chord:

I	I	IV	V	С	С	F	G
I	IV	I	V	С	F	С	G
I	IV	V	I	С	F	G	С
I	I	V	IV	С	С	G	F
I	V	I	IV	С	G	С	F
I	V	IV	I	С	G	F	С
I	IV	IV	v	С	F	F	G
I	IV	V	IV	С	F	G	F
I	V	IV	IV	С	G	F	F
I	IV	V	V	С	F	G	G
I	V	IV	V	С	G	F	G
I	V	V	IV	С	G	G	F

Often the chords may be selected to fit a pre-conceived melody, but just as often it is the progression itself that gives rise to the melody. Similar progressions abound in African popular music. They may be varied by the addition of sevenths (or other scale degrees) to any chord or by substitution of the relative minor of the **IV** chord to give, for example, **I–ii–V**. This sequence, using the ii chord, is also used cadentially in a common chord progression of jazz harmony, the so-called **ii–V–I** turnaround.

Where such a simple sequence does not represent the entire harmonic structure of a piece, it may readily be extended for greater variety. Frequently, an opening phrase has the progression **I–IV–V–V**, which ends on an unresolved dominant, may be "answered" by a similar phrase that resolves back onto the tonic chord, giving a structure of double the length:

I	IV	V	V	С	F	G	G
I	IV	V	I	С	F	G	С

Additionally, such a passage may be alternated with a different progression to give a simple binary or ternary form such as that of the popular 32-bar form.

12 Bar Blues

The 12-bar blues and its many variants use a three-line form of the **I IV V** progression that has generated countless hit records. There are many variants, here are a few:

Bas	ic 12	Bar I	Blues	Shut	fle Blue	es	
I	I	I	I	I	I.	I	I
IV	IV	I	I	IV	IV	I	I
V	V	I	I	v	IV	I	I
С	С	С	с	С	С	С	С
F	F	С	С	F	F	С	С
G	G	С	С	G	F	С	С

Quick	To Four			Seventh Chord Variation			
I	IV	I	I.	I	IV	I	17
IV	IV	I	I.	IV	IV7	I	17
V	IV	I	I	V	IV	I	V7
С	F	С	С	С	F7	С	C7
F	F	С	С	F	F7	С	C7
G	F	С	С	G	F	С	G7

Basic Jazz Blues Progression with Turnarounds

When the last bar contains the dominant, that bar may be called a turnaround: V7-I

In jazz, twelve-bar blues progressions are expanded with moving substitutions and chordal variations. The cadence (or last four measures) uniquely leads to the root by perfect intervals of fourths.

17	IV7 #IV°7	17	v7 I7	C7	F7 F#°7	C7	Gm7 C7
IV7	#IV°7	17	iii7 VI7	F7	F# °7	C7	Em7 A7
ii7	V7	iii7 VI7	II7 V7	Dm7	G7	Em7 A7	D7 G7
Beb	op Blues:						
17		IV7		17		v7 7	
IV7		#IV°	7	17		V/iib9	
ii7		V7		17 V/ii	b9	ii7 V7	,
C7		F7		C7		Gm7	C7
F7		F#°7		C7		A7(<i>b</i> 9)	
Dm7		G7		C7 A7	(b9)	Dm7	G7
Beb	op Blues Va	ariation:					
17		IV7		17		17	
IV7	17	#IV°	7	17		V/iib9	
ii7		V7		I7 V/ii	b9	ii7 V7	
C7		F7		C7		C7	
F7 (27	F#°7	,	C7		A7(<i>b</i> 9)	
Dm7		G7		C7 A7	'(<i>b</i> 9)	Dm7	G7

Minor Blues

There are also minor twelve-bar blues, such as John Coltrane's "Equinox" and "Mr. P.C.", and "Why Don't You Do Right?", made famous by Lil Green with Big Bill Broonzy. The chord on the fifth scale degree may be major (V7) or minor (v7), in which case it fits a dorian scale along with the minor i7 and iv7 chords, creating a modal feeling. Major and minor can also be mixed together, a signature characteristic of the music of Charles Brown.

Minor Blues

i7	i7	i7	i7	Cm7	Cm7	Cm7	Cm7
iv7	iv7	i7	i7	Fm7	Fm7	Cm7	Cm7
bVI7	V7	i7	i7	G#7	G7	Cm7	Cm7

Bird Changes

The Blues for Alice changes, Bird changes, Bird Blues, or New York Blues changes, is a chord progression, often named after Charlie Parker ("Bird"), which is a variation of the twelve-bar blues. The progression uses a series of sequential **ii**–**V** or secondary **ii**–**V** progressions, and has been used in pieces such as Parker's "Blues for Alice". Toots Thielemans's "Bluesette" and Parker's "Confirmation" also have similar progressions. Nikka Costa's 1983 song "First Love" also featured the progression on its chorus.

Туріса	al Jazz	Blues		Bird Jazz Blues				
17	IV7	17	17	IM7	vii° III7	vi7 II7	v7 I7	
IV7	IV7	17	iii7 VI7	IV7	iv7 VIIb	iii7 VI7	iiib7 Vib7	
ii7	V7	17 VI7	ii7 V7	ii7	V7	IM7 VI7	ii7 V7	
C7	F7	C7	C7	CM7	B° E7	Am7 D7	Gm7 C7	
F7	F7	C7	Em7 A7	F7	Fm7 B <i>b</i> 7	Em7 A7	E <i>b</i> m7 A <i>b</i> 7	
Dm7	G7	C7 A7	Dm7 G7	Dm7	G7	CM7 A7	Dm7 G7	

8 Bar Blues

In music, an eight-bar blues is a common blues chord progression. Music writers have described it as "the second most common blues form" being "common to folk, rock, and jazz forms of the blues". It is often notated in 4/4 or 12/8 time with eight bars to the verse. Early examples of eight-bar blues standards include: "How Long Blues" (Leroy Carr, 1928), "Nobody Knows You When You're Down and Out" (Bessie Smith, 1929)

8 Bar	Blues			Worried Life Blues				
I .	V7	IV7	IV7	I.	I	IV	IV	
I	V7 IV7	I	V7	I	V	I IV	IV	
с	G7	F7	F7	С	С	F	F	
С	G7 F7	С	G7	С	G	CF	CF	

Heartbre	ak Hotel			Slow Do	wn Blues		
I	I	IV	IV	17	V7	IV7	IV7
I	V	I IV	IV	17	V7	17	V7
С	С	F	F	C7	G7	F7	F7
С	G	CF	C G	C7	G7	C7	G7
Sitting C	n Top Of	The Worl	d	Nina Sim	none – Tro	ouble in M	lind
I.	17	IV	iv	I	17	IV	iv
17	V	17 IV	17 V	I VI7	ii V	I IV	IV
с	C7	F7	Fm	с	C7	F	Fm
C7	G	C7 F	C7 G	C A7	Dm G	CF	C G
Creep							
I	Ш	IV	iv				
V7	IV7	17	V7				
с	Е	F7	Fm				
G7	F7	C7	G7				

16 Bar Blues

The sixteen-bar blues can be a variation on the standard twelve-bar blues or on the less common eightbar blues. Sixteen-bar blues is also used commonly in ragtime music.

Basic	: 16 Bar Blu	es		16 Bar Blues Variation				
I	I	I	I	I	I	I	I	
I	I	I	I	IV	IV	I	I	
IV	IV	I	I	V	V	V or IV	V or IV	
V	V or IV	I	Ι	I	Ι	I	I	
С	С	С	С	С	С	С	С	
С	С	С	С	F	F	С	С	
F	F	С	С	G	G	G or F	G or F	
G	G or F	С	С	С	С	С	С	

16 Bar Blues Variation				16 Bar Blues Variation			
I	I	I	I	I	I	I	I
IV	IV	I	I	IV	IV	I	I
IV	IV	I	1	V	V or IV	V	V or IV
V	V or IV	I	I	V	V or IV	I	I
С	С	С	С	С	С	С	С
F	F	С	С	F	F	С	С
F	F	С	С	G	G or F	G	G or F
G	G or F	С	С	G	G or F	С	С

16 Bar Blues Variation

I	Ι	I	I
IV	IV	I	I
V	IV	V	IV
I	I	I	I
С	С	С	С
F	F	С	С
G	F	G	F
С	С	С	С

32 Bar Form

The 32-bar form, also known as the AABA song form, American popular song form and the ballad form, is a song structure commonly found in Tin Pan Alley songs and other American popular music, especially in the first half of the 20th century.

As its alternative name AABA implies, this song form consists of four sections: an eight-bar A section; a second eight-bar A section (which may have slight changes from the first A section); an eight-bar B section, often with contrasting harmony or "feel"; and a final eight-bar A section. The core melody line is generally retained in each A section, although variations may be added, particularly for the last A section.

Examples of 32-bar AABA form songs include "Over the Rainbow", "What'll I Do", "Make You Feel My Love", "Blue Skies". Many show tunes that have become jazz standards are 32-bar song forms.

Basic Song Form

At its core, the basic AABA 32-bar song form consists of four sections, each section being 8 bars in length, totaling 32 bars. Each of these 8-bar sections is assigned a letter name ("A" or "B"), based on its melodic and harmonic content. The A sections all share the same melody (possibly with slight variations), and the recurring title lyric typically falls on either the first or last line of each A section. The "B" section musically and lyrically contrasts the A sections, and may or may not contain the title lyric. The "B" section may use a different harmony that contrasts with the harmony of the A sections. For example in the song "I've Got Rhythm", the A sections are in the key of B b , but the B section involves a circle of fifths series of dominant seventh chords going from D7, G7, C7 to F7. Song form terminology is not standardized, and the B section is also referred to as the "middle eight", "bridge", or "primary bridge". The song form of "What'll I Do" by Irving Berlin is as follows:

Section Name	Lyric from "What'll I Do" by Irving Berlin
A ₁	What'll I do when you are far away and I am blue? What'll I do?
A ₂	What'll I do when I am won'dring who is kissing you? What'll I do?
В	What'll I do with just a photograph to tell my troubles to?
A ₃	When I'm alone with only dreams of you that won't come true What'll I do?

Sectional Verse

Some Tin Pan Alley songs composed as numbers for musicals precede the main tune with what was called a "sectional verse" or "introductory verse" in the terminology of the early 20th century. This introductory section is usually 16 bars long and establishes the background and mood of the number, and is musically undistinguished, with a free musical structure, speech-like rhythms, and rubato delivery, in order to highlight the attractions of the main tune. The sectional verse is often omitted from modern performances. It is not assigned a letter in the "AABA" naming scheme. The introductory verse from "What'll I Do" by Irving Berlin is as follows:

Gone is the romance that was so divine, 'tis broken and cannot be mended You must go your way, and I must go mine, but now that our love dreams have ended...

Bridge

In music theory, the middle eight or bridge is the B section of a 32-bar form. This section has a significantly different melody from the rest of the song and usually occurs after the second "A" section in the AABA song form. It is also called a middle eight because it happens in the middle of the song and the length is generally eight bars.

Terminological Confusion

In early-20th-century terminology, the main 32-bar AABA section, in its entirety, was called the "refrain" or "chorus". This is in contrast to the modern usage of the term "chorus", which refers to a repeating musical and lyrical section in verse–chorus form. Additionally, "verse," "chorus" and "refrain" all have different meanings in modern musical terminology.

Early	Modern	Definition
Terminology	Terminology	
Introductory Verse	Introductory Verse	The opening section, often 16 bars in length, which
Or	Or	resembles recitative from opera.
Sectional verse	Sectional verse	
Refrain	Verse-Refrain Form	The 32-bar section, composed of four separate 8-bar
Or	Or	sections, taking the form AABA.
Chorus	AABA Form	
None	Verse	Any of the three individual 8 bar "A" sections
Bridge	Bridge	8-Bar "B" section
	Or	
	Middle 8	
	Or	
	Release	
	Or	
	Primary Bridge	
None	Refrain Line	This recurring lyric line is often the title of the song
		(e.g. "Yesterday", "Let's Face the Music and Dance",
		"Luck Be a Lady Tonight").

History

Though the 32-bar form resembles the ternary form of the operatic da capo aria, it did not become common until the late 1910s. It became "the principal form" of American popular song around 1925–1926, with the AABA form consisting of the chorus or the entirety of many songs in the early 20th century.

The 32-bar form was often used in rock in the 1950s and '60s, after which verse-chorus form became more prevalent. Examples include:

- George Gershwin "I Got Rhythm" (1930)
- Jerry Lee Lewis' "Great Balls of Fire" (1957)
- The Everly Brothers' "All I Have to Do Is Dream" (1958)
- The Shirelles' "Will You Love Me Tomorrow" (1960)
- The Beach Boys' "Surfer Girl" (1963)

Though more prevalent in the first half of the 20th century, many contemporary songs show similarity to the form, such as "Memory", from Cats, which features expanded form through the B and A sections repeated in new keys. Songwriters such as Lennon–McCartney and those working in the Brill Building also used modified or extended 32-bar forms, often modifying the number of measures in individual or all sections. The Beatles ("From Me to You" (1963) and "I Want to Hold Your Hand" (1963)), like many others, would extend the form with an instrumental section, second bridge, break or reprise of the introduction, etc., and another return to the main theme. Introductions and codas also extended the form. In "Down Mexico Way" "the A sections... are doubled in length, to sixteen bars—but this affects the overall scheme only marginally". The theme tune of the long-running British TV series Doctor Who has, in some incarnations, followed 32 bar form.

Blues Ballad

The term blues ballad is used to refer to a specific form of popular music which fused Anglo-American and Afro-American styles from the late 19th century onwards. Early versions combined elements of the European influenced "native American ballad" with the forms of African American music. From the 20th century on it was also used to refer to a slow tempo, often sentimental song in a blues style.

Structure And Variations

The blues ballad often uses the Thirty-two-bar form of verse-verse-bridge-verse, in contrast to the 12-bar or 8-bar blues forms.

Popular Blues Ballads

The first blues ballads tended to deal with active protagonists, often anti-heroes, resisting adversity and authority, often in the context of industrialization. They usually lacked the strong narrative common in European ballads, and emphasized instead individual character. They were often accompanied by banjo and guitar and often followed a standard 12-bar the blues format, with a repeated refrain in the last line of every verse. Blues ballads are usually anonymously authored and were performed by both black and white musicians in the early 20th century. Ballads about anti-heroes include "Wild Bill Jones", "Stagger

Lee" and "John Hardy". The most famous blues ballads that deal with heroes in the context of industrialization include those about John Henry and Casey Jones.

Blues Ballads In Other Genres

From the late 19th century the term ballad began to be used for sentimental songs with their origins in the early 'Tin Pan Alley' music industry. As new genres of music, including the blues, began to emerge in the early 20th century the popularity of the genre faded, but the association with sentimentality meant led to this being used as the term for a slow love song from the 1950s onwards.

Today the term is used to describe a song that uses a blues format with a slow tempo, often dealing with themes of love and affection. Examples include songs like B. B. King's "Blues on the Bayou", Fats Domino's "Every night about this time", Percy Mayfield's love song "Please Send Me Someone to Love", and Buddy Johnson's "Since I Fell for You". The blues ballad format is also popular in rock, jazz, country music, such as Janis Joplin "Cry Baby", Jimi Hendrix "Red House", Grand Funk Railroad "Heartbreaker", Jazzy blues singer Charles Brown " Merry Christmas, Baby", "Please Come Home for Christmas", Phoebe Snow "Poetry Man", "San Francisco Bay Blues", country singer Crystal Gayle " Don't It Make My Brown Eyes Blue", and Freddy Fender "Wasted Days and Wasted Nights".

The '50s progression

Another common way of extending the **I–IV–V** progression is by adding the chord of the sixth scale degree, giving the sequence **I–vi–IV–V** or **I–vi–ii–V**, sometimes called the 50s progression or doo-wop progression. For example, in C major:

I vi IV V	C Am F G	
or	or	
I vi ii V	C Am Dm G	3

The list of songs that used this progression in the 1950s are endless. A few examples are Blue Moon, All I Have To Do Is Dream, Oh Pretty Woman, Angel Baby, Donna, Duke Of Earl, Earth Angel, Eternal Flame, Last Kiss, Lollipop, Monster Mash, Saturday Night, Perfect, Please Mr. Postman, This Magic Moment, Why Do Fools Fall In Love, to name a few.

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Circle Progressions

The ragtime progression (**E7 A7 D7 G7**) often appears in the bridge of jazz standards. The **III7 VI7 II7 V7** leads back to C major but is itself undefined in key. Introducing the **ii** chord into these progressions emphasizes their appeal as constituting elementary forms of circle progression. These, named for the circle of fifths, consist of adjacent roots in ascending fourth or descending fifth relationship, for instance, the sequence **vi ii V1** ascends with each successive chord to one a fourth above the previous. Such a motion, based upon close harmonic relations, offers undoubtedly the most common and the strongest of all harmonic progressions. Short cyclical progressions may be derived by selecting a sequence of chords from the series completing a circle from the tonic through all seven diatonic chords:

Clock	12:00	11:00	5:00	4:00	3:00	2:00	1:00
Degree	1	4	7	3	6	2	5
Chord	I	IV	vii°	iii	vi	ii	v

This type of progression was much used by classical composers, who introduced increasingly subtle inflections. Particularly, substitution of major for minor chords giving, for example, **I**, **VI**, **II**, **V** allowed a more sophisticated chromaticism as well as the possibility of modulation.

Harmonizing the scale

As well as the cyclical underpinning of chords, the ear tends to respond well to a linear thread; chords following the scale upwards or downwards. These are often referred to as step progressions because they follow the steps of the scale, making the scale itself a descending bass line. At its simplest, this descending sequence may simply introduce an extra chord, either **III** or **V**, into the **I vi IV V** type of sequence described above. This chord allows the harmonization of the seventh degree, and so of the bass line **I**, **VII**, **VI**

The finale measures of the first movement of Ravel's Piano Concerto in G feature the harmonization of a descending hybrid scale (phrygo-major). In this special case, Ravel used a parallel series of major triads ($\mathbf{G} \mathbf{F}^{\#} \mathbf{E} \mathbf{D} \mathbf{C} \mathbf{B}^{b} \mathbf{A}^{b} \mathbf{G}$).

Minor and Modal Progressions

A notable example of a descending minor chord progression is the four-chord Andalusian cadence, **i** VII VI V. Folk and blues tunes frequently use the Mixolydian scale, which has a flat seventh degree, altering the position of the three major chords to I^{b} VII IV For example, if the major scale of C, which gives the three chords C, F and G on the first, fourth and fifth degrees, is played with G as the tonic, then the same chords will now appear on the first, fourth, and seventh degrees. The minor-third step from a minor key up to the relative major encouraged ascending scale progressions, particularly based on an ascending pentatonic scale. Typical of the type is the sequence **i-III-IV (or iv)-VI**.

During 1960s some pop groups started to experiment with modal chord progressions as an alternative way of harmonizing blues melodies. This created a new system of harmony that has influenced subsequent popular music. This came about partly from the similarity of the blues scale to modal scales and partly from the characteristics of the guitar and the use of parallel major chords on the pentatonic minor scale. With barre chords on guitar, the same chord shape can be moved up and down the neck without changing the fingering. This phenomenon is also linked to the rise in use of power chords in various sub-genres of rock music.

Common Progressions

I V vi IV Progression

The **I V** vi **IV** progression is a common chord progression popular across several genres of music. In the key of C major, this would be: **C G Am F**

Progression & Inversions			& Inversions	In The Key Of C				
I	v	vi	IV	C G Am F (Optimistic)				
v	vi	IV	I	G Am F C				
vi	IV	I	v	Am F C G (Pessimistic)				
IV	I	v	v	F C G Am				

1-5-b7-4 (I, V, ^bVII, IV) Progression

This may be viewed as a variation of I - V - vi - IV, replacing the submediant with the subtonic. It consists of two I - V chord progressions, the second a whole step lower (A–E–G–D => I–V in A and I–V in G), giving it harmonic drive.

In C this would be: C G Bb F

m2-b2m7-1 (ii, ^bII7, I) Progression

ii - V - I with tritone substitution (^bII7 instead of V7) making it: ii ^bII7 I

In the key of C: Dm Bb7 C

^b3 (^bIII) + as Dominant Substitute

vii^o7/V - V - I (common in ragtime)

The Andalusian Cadence

The Andalusian cadence (diatonic phrygian tetrachord) is a term adopted from flamenco music for a chord progression comprising four chords descending stepwise, a **vi V IV III** progression with respect to the major mode or **i VII VI V** progression with respect to the minor mode. It is otherwise known as the minor descending tetrachord. Traceable back to the Renaissance, its effective sonorities made it one of the most popular progressions in classical music.

Despite the name it is not a true cadence (i.e., occurring only once, when ending a phrase, section, or piece of music); it is most often used as an ostinato (repeating over and over again). It is heard in rock songs such as "Runaway" by Del Shannon.

vi-ii-V-I Progression

In music, the **vi–ii–V–I** progression is a chord progression (also called the circle progression for the circle of fifths, along which it travels).

This progression in C major is: Am Dm G C

I vi ii V Progression

I-vi-ii-V is one of the most common chord progressions in jazz. The progression is often used as a turnaround, occurring as the last two bars of a chorus or section. The I-vi-ii-V chord progression occurs as a two-bar pattern in the A section of the rhythm changes. It can be varied as well. Many players usually play a dominant 7th chord rather than a minor 7th chord as the VI chord in a I-VI-II-V." In the jazz minor scale, the diatonic progression below is possible.

iM7 vi-7b5 ii7 V+7 CmM7 Am7b5 Dm7 G7b13

Coltrane Changes

Coltrane changes (Coltrane Matrix or cycle, also known as chromatic third relations and multi-tonic changes) are a harmonic progression variation using substitute chords over common jazz chord progressions. The changes serve as a pattern of chord substitutions for the **ii–V–I** progression and are noted for the tonally unusual root movement by major thirds (either up or down by a major third interval as opposed to more typical minor or major second intervals, creating an augmented triad. Root movement by thirds is unusual in jazz, as the norm is circle of fifths root movement, such as **ii-V-I**.

Coltrane Substitution

ii–V7–I progression lasting two measures. The Coltrane substitution, Coltrane changes, or Countdown formula, is as follows. Start with a **ii–V–I** turnaround lasting four measures:

ii7	V7		I	I	
Dm7	G7	Ι	С	С	

with the dominant chord (V7) preceding the tonic (I). One substitutes two chords for each of the first three:

m2		p4		m3		p4		m3	p4		
Dm7	Eb7	Ι	Ab		в7	Ι	Е	G7		C	I
ii7	V7		I								

Notice a dominant seventh chord preceding and thus tonicizing a major chord on C and also E and Ab, both a major third from C.

V7	I	V7	I	V7	I
Eb7	Ab	в7	E	G7	C

Four-measure *ii-v-I* progression in C with Coltrane substitution. This also may begin on C, as on "Giant Steps", giving:

С	Eb7	2	γp	В7		Е	G7		С	
m	.3	p4	m	3	p4	Ł	m3	p	4	

Tritone substitution (Note: I'm using all flats to make it more clear)

Tritone - A Tritone is 3 whole tones (or 6 semi-tones) from a note in either direction. The triton for C is F#. The triton for F# is C conversely.

Chords in Roo	t positions:			
Chords	Notes			
C7	С	E	G	Bb
Gb7	Gb	Bb	Db	Е
FM7	F	Α	С	Е

C7 inverted to	o see more clearly t	he movement of no	tes	
Chords	Notes			
C7	G	Bb	С	E
Gb7	Gb	Bb	Db	E
FM7	F	Α	С	E

If we substitute F#7(Gb7) for the C7 in [F C7 F], then we get [F F#7 F]. F#7 is the dominant seventh in the key of B, so [B F#7 B] can substitute it's dominant seventh with C7 giving us [B C7 B] The tritone substitution is one of the most common chord substitutions found in jazz. Tritone substitutions are sometimes used in improvisation, often to create tension during a solo. Tritone substitution is merely replacing the dominant seventh chord, G7 in the case of the key of C, with

that chord's tritone as a dominant seventh chord.

Rootless Dirty Chords with Blues Scale

This is an example of using rootless chords on piano with an accompaniment of a blues scale. These chords are often described as dirty chords because of their use of dissonance. They are rootless because the bass is assumed to be covered by a bass instrument such as a bass guitar or a stand up bass. When voicing these chords on a keyboard you'll immediately notice a lot of directly adjacent notes which create dissonance or the "dirty" sound.

The Chords

C13	F13	E7b13#9	A7b13#9	D13	G13
D	D	G	F	E	E
Bb	А	D	Db	С	В
А	G	С	С	В	А
E	Eb	Ab	G	Gb	F

The Blues Scale

С	D	Eb	Е	G	Α

Blues Slide Notes

Slide notes are directly adjacent notes that are played by sliding from one note to the next, where the first or second note is played more briefly than the landing note.

Slide Up	Slide Down
D – Eb – E	E – Eb – D
D - Eb	D – Eb
Eb – E	Eb – D
Ab - A	

Addition To The Scale

Even though it is not notated in the scale, a slide down can be applied to the **Ab** – **A** when playing an upward moving riff.

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Keyboard Playing Like Norah

Norah Jones does a few things that make her keyboard playing very soulful and unique. She combines elements of blues, country and jazz.

Floyd Cramer Slip Notes

The country influence can be heard in her use of Floyd Cramer slip-notes. Floyd Cramer did this thing on piano that made his playing instantly identifiable. Floyd's signature playing style was a cornerstone of the pop-oriented "Nashville sound" of the 1950s and 1960s. Here are a couple of ways that Floyd described what a "slip-note" is: According to his grandson, he described it as "Hit the wrong note first, then the right note". During an interview he described it as "a whole-tone slur which gives more of a lonesome cowboy sound. You hit a note and slide almost simultaneously to another."

How It Is Done

Essentially it is a two- or three-part right-hand chord with the slipped note providing a melodic embellishment. A slow grace note is added on the beat a whole step below the target note, yet slightly louder than the target, with the target note just past the beat. A third note is played above the target note at the same time as the grace note, and held through the target and at the same volume as the grace note. Here's how it might be notated:



The Difference Between a Slip-Note and a Grace Note

- Grace notes are usually only a half step whereas a slip-note is usually a whole step.
- Grace notes are usually played before the beat whereas slip-notes are played on the beat.

If you want to hear what a Floyd Cramer slip-note sounds like, then listen to a few songs where he incorporates it into the piano accompaniment, such as "Last Date" an instrumental by Floyd Cramer, or "Crazy" by Patsy Cline where Cramer was the session piano player.

Where Can Slip Notes Be Applied

There are basically two ways to play slip-notes. One is playing a root position major chord and the second is playing a first inversion major chord. In the root position, the slip note is the 2^{nd} to the 3^{rd} note. In the second inversion slip-note, it is a slip from the 6^{th} to the 5^{th} and then usually back to the 5^{th} .

Example Using a G Chord

Type 1 – Root		Туре 2	Type 2 – 1 st Inversion						
2 nd	to 3 rd	5 th to (5 th to 6 th and back to 5 th						
D	D	G	G	G					
A	В	D	Е	D					
	G			В					

Blues Slide Notes

Another thing that Norah does when she's playing is to use blues "slide notes". A slide note is when you slide from one note to another. It's often done with an adjacent black key to a white key which makes it easy to slide from one to the other. For example, you might slide from Eb to E, or Ab to A. Both of these are examples of an "up-slide". It's also possible to slide in the other direction, like from Eb to D, or Ab to G. That would be called a "down-slide". Slide notes are not just done with two adjacent notes. They can also include three adjacent notes. For example, you might do a slide from C to D by sliding from D to Db to D. If you look at many blues scales, you'll notice that many of them if not all, contain multiple adjacent notes where these slides are possible. For example in the following hexatonic blues scale for C minor:

C Eb F Gb G Bb

The bold notes are all directly adjacent to each other.

Use of 2nd and Alternate Bass Voicing

Norah will often play chords with added notes where she plays the 2^{nd} along with the 1, 3 and 5. So essentially she is playing 1, 2, 3 and 5. In the following example, you can see how she alternates in the bass between root voicings of 1 and 5 and inversions with added 2^{nds} . While the bass notes may be part of the triad other than the root, it can also sometimes be the added 2^{nd} .

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SONG WRITING

Here are a couple of examples of pieces notated in the style of Norah Jones. Note the bass chord voicing. In the first measure she plays a 1 and 5 of a G major chord, then she plays a G major 2nd inversion with an added 2nd. Next she plays the 1 and 5 of a C major chord followed by a C 1st inversion with an added 2nd, where the 2nd is in the bass. The second measure begins as the first, but on the second set of chords she plays the 1 and 5 of a D major chord before playing the same inverted C chord at the end of the first measure with the 2nd in the bass. The rest of the measures are similar to the first two, but mixed around. In the treble clef, she starts with a slip-note voicing or a G major with the slip from A to B, then she plays an A and D, doubling the added A in the bass chord. After a single G quarter note, she plays a slip note C major, then she doubles the added D in the C major chord in the bass. There are several other slip note voicings of G, D and C in this piece. Note that they are all type 1 slip notes.



In this second piece, the bass clef is exactly the same as in the first piece, but the treble clef is different. In the first measure, she plays a G major chord slip note voicing with the note being a D to E, then back to D. This is different from the first piece in that the slip note is a 5th to the 6th instead of a 2nd to a 3rd.



Along with using slip notes and slide notes and blues scales, she sometimes uses chord voicings that are generally thought of being in the realm of jazz.

The Simple Map



A Map For C

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Major Key Progression Map

The two maps above are progression maps. The first is a general map that is based upon the roman numerals of chords in a major key. The second is constructed off of the first map for the key of C major. Starting from the root note you can jump to any other square. From that square you may only jump to an adjacent square or to an adjacent square to a like named square. For example I can go from C to Dm, then since there are two Dm squares I can jump to any squares Dm points to. In this case my choices are Dm to Em or G. If I decide to go to G then my next chord option is any chord a G square points to which is Em, Am or C. **Note:** This is just a loose guideline not a set of rules.



SONG WRITING

Lyrics

To be a good lyricist, you need to be a good writer. Just like most things, practice will make you improve. It is the same thing with writing. There are some exercises that can help you get better at writing lyrics.

Object Writing

You arbitrarily pick an object, any object, a real object, and focus your senses on it. Use your senses, visual, smell touch, taste, and sound. There are a couple of other senses you may not be aware of known as organic sense and kinesthetic sense.

Organic Sense

Organic sense is your awareness of inner bodily functions, for example, heartbeat, pulse, muscle tension, stomach aches, cramps, breathing, etc...

Kinesthetic Sense

Kinesthetic sense is, roughly, your sense of relation to the world around you. When you get seasick or drunk, the world around you blurs. When the train you're sitting on is standing still, but the one next to it starts moving, your kinesthetic sense goes crazy.

Making Metaphors

Metaphors are one of the mainstays of good lyric writing; indeed most of creative writing uses them extensively. Conflict is essential for metaphors. Put things that don't belong together literally. There are three types of metaphor:

1. Expressed Identity

Asserts an identity between two nouns, e.g. fear is a shadow; a cloud is a sailing ship. Expressed identity comes in three forms:

- X is Y Fear is a shadow
- The Y of X The shadow of fear
- X's Y Fear's shadow

2. Qualifying Metaphor

Adjectives qualify nouns; adverbs qualify verbs. Friction within these relationships creates metaphor, e.g. hasty clouds; to sing blindly

3. Verbal Metaphor

Formed by conflict between the verb and it's subject and / or object, e.g. clouds sail; he tortured his clutch; frost gobbles summer down.

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Playing in Keys

Like musical notes, words can group together in close relationships, like belonging to the same key. Call this a diatonic relationship. For example, here are some random words that are diatonic to, or in the same key as: Tide - ocean; moon; recede; power; beach; perpetual; ebb; flow. This is playing the key of "tide", where tide is the fundamental tone or tonic note. This is a way of creating collisions between elements that have the at least something's in common, a fertile ground for metaphor. There are many other keys that "tide" can belong to when something else is the fundamental tone or tonic note. For example if the tonic note is "power" - tide; avalanche; storm; hurricane; tornado; army; socket; nuclear; etc... All of these words are related to each other by virtue of their relationship to the word "power". Combining these words together, it is possible to discover good metaphors. For example:

An avalanche is an army of snow. This army is the tornado of our revolution. A socket holds back the tides of electricity.

Key of "Moon" - stars; harvest; lovers; crescent; astronauts; calendar; tide; waning; waxing.

The Nevada sky is a rich harvest of stars Evening brings a harvest of lovers to the beach. The lovers' feelings waned to a mere crescent. The crescent of human knowledge grows with each astronaut's mission. A new calendar washes in a tide of opportunities.

Essentially, metaphor works by revealing some third thing that two ideas share in common. One good way of finding metaphors is by asking these two questions:

What characteristics does my idea "tide" have? What else has those characteristics?

Answering the second question usually releases a flood of possible metaphors. Often the relationship between two ideas is not clear until you recognize the linking term.

Exercise to Create New Metaphors

Make an arbitrary list of five interesting adjectives and five interesting nouns.

Example:

Adjectives	Nouns
Smoky	Conversation
Refried	Railroad
Decaffeinated	Rainbow
Hollow	Rain Forest
Understated	Eyebrows

Take any combination and try to write a sentence or short paragraph about them. The following are a list of all the possible combinations:

Smoky conversation	Refried conversation	Hollow conversation
Smoky railroad	Refried railroad	Hollow railroad
Smoky rainbow	Refried rainbow	Hollow rainbow
Smoky rain forest	Refried rain forest	Hollow rain forest
Smoky eyebrows	Refried eyebrows	Hollow eyebrows
Decaffeinated conversation	Understated conversation	
Decaffeinated railroad	Understated railroad	
Decaffeinated rainbow	Understated rainbow	
Decaffeinated rain forest	Understated rain forest	
Decaffeinated eyebrows	Understated eyebrows	

Use the combinations in a short sentence of paragraph:

Since you left, everything seems dull and lifeless. My days have been bleached of sound and color. Even the rainbow today has been decaffeinated.

The nights were dull and listless, filled with banal refried conversation.

Nouns	Verbs		
Squirrel	Preaches		
Wood stove	Vomits		
Surfboard	Cancels		
Reef	Celebrates		
Aroma	Palpitates		
Squirrel preaches		Wood stove preaches	Surfboard preaches
Squirrel vomits		Wood stove vomits	Surfboard vomits
Squirrel cancels		Wood stove cancels	Surfboard cancels
Squirrel celebrates		Wood stove celebrates	Surfboard celebrates
Squirrel palpitates		Wood stove palpitates	Surfboard palpitates
Reef preaches		Aroma preaches	
Reef vomits		Aroma vomits	
Reef cancels		Aroma cancels	
Reef celebrates		Aroma celebrates	
Reef palpitates		Aroma palpitates	

Another exercise is to make a random list of interesting nouns and verbs:

One thing becomes clear right away: you get better results combining nouns and verbs than from combining adjectives and nouns. Verbs are the power amplifiers of language. They drive it; set it in motion. Look at all of the great poets, e.g. Yeats, Frost, Sexon, Eliot. If you go through their poems, you'll see that their use of verbs is why they crackle with power.

Now do the same thing with nouns and nouns:

Nouns	Nouns
Summer	Rolls-Royce
Ocean	Savings Account
Thesaurus	Paintbrush
Indian	Beach Ball
Shipwreck	Mattress

Summer Rolls Royce	Ocean Rolls Royce Thesaurus Rolls Ro			
Summer savings account	Ocean savings account	Thesaurus savings account		
Summer paintbrush	Ocean paintbrush	Thesaurus paintbrush		
Summer beach ball	Ocean beach ball	Thesaurus beach ball		
Summer mattress	Ocean mattress	Thesaurus mattress		
Indian Rolls Royce	Shipwreck Rolls Royce			
Indian savings account	Shipwreck savings account			
Indian paintbrush	Shipwreck paintbrush			
Indian beach ball	Shipwreck beach ball			
Indian mattress	Shipwreck mattress			
Try using the three forms of expres	sed identity on these word lists:			
Summer Rolls Royce:				
X is Y	The Y of X	X's Y		
Summer is a Rolls Royce	The Rolls Royce of summer	Summer's Rolls Royce		
Summer is the Rolls Royce	e of seasons.			
• Winter is gone. Time for an	other ride in the Rolls Royce of sum	mer.		
Once again, summer's Rol	s Royce has collapsed into the icebo	pat of winter.		
Summer Savings Account:				
V in V		Y'a V		

X is YThe Y of XX's YSummer is a savings accountThe savings account of summerSummer's savings account

Lyric Metaphor Writing Exercise

Step 1

Make a list of five interesting adjectives. Then for each one, find an interesting noun that creates a fresh, exciting metaphor. Take as long as you need for each adjective, hours, even days. Keep it in your vision. Push it against every noun you see until create a breakthrough collision. Remember that you can make vivid adjectives out of verbs: to wrinkle becomes the adjective wrinkled (wrinkled water) or wrinkling (the wrinkling hours). These are called participles.

Step 2

Mow make a list of five interesting nouns, and locate a good verb for each one. This may be hard, since you are used to looking at "things" in the world, not "actions".

Step 3

Make a list of five interesting verbs and track down a noun for each one.

Step 4

Make a list of five interesting nouns and find an adjective for each one. Don't forget about participles

Step 5

Make a list of five interesting nouns and find another noun for each one. Use any form of expressed identity you think works best.

Definition: Participle Phrase

A participle is a verb that functions as a modifier. Participles provide further information about the noun or nouns in a sentence, just like an adjective or adverb. A participial phrase is a phrase that looks like a verb, but actually functions as an adjective; it modifies a noun in the same sentence. Phrases like this can "spice up" a noun and provide added description about what it's doing or what it looks like. They're often used in pieces that need to tell readers a lot in a few words, like newspaper articles or even fiction books.

Some basic participles include:

- The running dog crashed into the wall.
- The crying baby kept her parents up all night.
- Jack watched the sleeping giant as he crept by.

Building Worksheets

1. Focus Your Lyric Idea As Clearly As You Can

Let's say you want to write about homelessness. Sometimes you'll start the lyric from an emotion: "That homeless woman with everything she owns in a shopping cart really touches me. I want to write a song about her." Sometimes you'll write from a cold calculated idea: "I'm tired of writing love songs, I wan to do one on a serious subject, maybe homelessness." Or you may write from a title you like, maybe, "Risky Business". Then the trick is to find an interesting angle on it, perhaps: "What do you do for a living?" "I survive on the streets." "That's a pretty risky business." In each case, it's up to you to find the angle, brainstorm the idea, and create the world the idea will live in. Object writing is the key to developing

choices. You must dive into your vaults of sense material, those unique and secret places, to find out what images you've stored away, in the present example, around the idea of homelessness.

Object write about the subject.

Look though the writing, did you find an expressive image, like a broken wheel on her shopping cart, that can serve as a metaphor, a vehicle to carry your feelings. Did you see some situation, like your parents fighting, that seems to connect you with her situation? These expressive objects or situations are what T.S. Eliot calls "**Objective Correlatives**" - objects anyone can touch, smell, see that correlate with the emotion you want to express. Broken wheels or parents fighting work nicely as objective correlatives. When you find a good idea, don't stop at just one. Write down the good idea on a separate sheet of paper or in a separate digital file.

2. Make A List Of Words That Express Your Idea

Using a thesaurus, one set up according to Roget's original plan according to the flow of ideas, a setup perfect for brainstorming. Write down a list of relevant words. Pair down the list if it's too big. Consider the vowel sounds of each word and organize them accordingly.

3. Look up each word in a rhyming dictionary.

Be sure to include imperfect rhyme types, and to select only words that connect with your ideas. Avoid cliché rhymes.

Perfect Rhyme

- 1. The syllables' vowel sounds are the same.
- 2. The consonant sounds after the vowels, if any, are the same.
- 3. The sounds before the vowels are different.

Remember lyrics are sung, not read or spoken. When you sing, you exaggerate vowels. And since rhyme is a vowel connection, lyricists can make sonic connections in ways other than perfect rhyme.

Family Rhyme

- 1. The syllables' vowel sounds are the same.
- 2. The consonant sounds after the vowels belong to the same phonetic families.
- 3. The sounds before the vowels are different.

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Here's a chart of the three i	important consonant families:
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	Plosives			Fricatives				Nasals					
Voiced:	b	d	g	v	TH	Z	zh	j		m	n	ng	
Unvoiced:	р	t	k	f	th	S	sh	ch					

Each of the three boxes, plosives, fricatives, and nasals, form a phonetic family. When a word ends in a consonant in one of the boxes, you can use other members of the family to find perfect rhyme substitutes.

Plosives Family	Rub, up, thud, putt, bug, stuck are members of the plosives family, so they are
	family rhymes.
Fricatives Family	Love, buzz, judge, fluff, fuss, hush, touch are all members of the fricative family, so
	they rhyme.
Nasals Family	Strum, run, sung are members of the nasal family.

Say you want to rhyme line two of the following: Tire tracks across my face I'm stuck in a rut

1. Look up the perfect rhymes for "rut" - cut, glut, gut, hut, shut...

2. Look for family rhymes of t's relatives

ud	uk	ub	up	ug
blood	buck	club	hard up	bug
flood	duck	hub	makeup	jug
mud	luck	pub	cup	unplug
stud	muck	scrub		plug
thud	stuck	tub		shrug
	truck			snug
				tug

Same idea with these lines: Tire tracks across my back There's nowhere I feel safe

- 1. Perfect Rhyme "Safe" Waif
- 2. Imperfect Rhyme in family of 'f'

as	av	az	aj	ath	aTH
case	behave	blaze	age	faith	bathe
ace	brave	craze	cage		
breathing space	cave	daze	page		
chase	grave	haze	rage		
face	shave	phrase	stage		
disgrace	slave	paraphrase			
embrace	wave	praise			
grace					
lace					
resting space					
space					

Same idea with these lines:

Tire tracks across my head Pounding like a drum

- 1. Perfect Rhyme hum, pendulum, numb, slum, strum
- 2. Imperfect Rhyme in family of "m"

un	ung
fun	hung
gun	flung
overrun	wrung
won	sung
jettison	
skeleton	

Additive Rhyme

- 1. The syllables' vowel sounds are the same.
- 2. One of the syllables add extra consonants after the vowel.
- 3. The sounds before the vowel are different.

When the syllable you want to rhyme ends in a vowel. e.g. play, free, fly, the only way to generate alternatives is to add consonants after the vowel. The guideline is simple: The less sound you add, the closer you stay to perfect rhyme.

Look again at the Table of Family Rhymes. Voiced plosives, b, g, g put out the least sound. Use them first, rhyming, for example ricochet with paid, then the unvoiced plosives, rhyming free with treat. Next voiced fricatives, rhyming fly with alive. Then on to unvoiced fricatives, followed finally by the most noticeable consonants (aside from I and r), the nasals. You'd end up with a list moving from to perfect rhyme to farthest away: free, speed, cheap, sweet, grieve, belief, dream, clean, deal.

Of course you can add consonants even if there are already consonants after the vowel. For example, street/sweets, alive/drives, dream/screamed, trick/risk.

You can even combine this technique with family rhyme, e.g. dream/cleaned, club/floods/shove/stuffed. This gives you even more options, making it easier to say what you mean.

Subtractive Rhyme

- 1. The syllables' vowel sounds are the same.
- 2. One of the syllables adds extra consonants after the vowel.
- 3. The sounds before the vowels are different.

It's basically the same as additive rhyme. The difference is practical. If you start with fast, class is subtractive. If you start with class, fast is additive.

Tire tracks across my face Help, I'm sinking fast

fast: glass; flat; mashed (family); laughed(family); crash (fam. sub.)

The possibilities grow.

Assonance Rhyme

- 1. The syllables' vowel sounds are the same.
- 2. The consonant sounds after the vowels are unrelated.
- 3. The sounds before the vowels are different.

This is about as far as you can get from perfect rhyme without changing the vowel sounds. Consonants after the vowels have nothing in common.

Tire tracks across my face I hope you're satisfied

Satisfied: life; trial; crime; sign; rise; survive; surprise.

Use these techniques. You'll have much more leeway saying what you mean, and your rhymes will be fresh and useful. Again look actively at each word. Dive through your senses with them as though you were object writing.

Brainstorming with a rhyming dictionary prepares you to write a lyric. At the same time you're brainstorming your ideas, you are also finding sounds that you can use later. With solid rhyming techniques that include family rhymes, additive and subtractive rhymes, assonance and even consonance rhymes (especially for "I" and "r").

The following is a sample worksheet including both perfect and imperfect rhymes. A worksheet externalizes the inward process of lyric writing. It slows your writing process down so you can get to know it better, like slowing down when you play a new scale to help get it under your fingers. The more you do it, the faster and more efficient you'll get.

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Sample Worksheet for Risky Business

- 1. risk
- 2. business
- 3. left out
- 4. freeze (wheel, shield)
- 5. storm

- 6. dull (numb)
- 7. night (child)
- 8. change
- 9. defense
- 10. home (hope, broken, coat)

1. Risk 4. Freeze 10. Home 7. Night cliff grieve flight disowned blown fist leave spite kissed bride bone peace stiff strike unknown appeased itch street prize stoned debris dethroned pitch despised drift diseased deprived zone switch child guarantee(s) hope shift wheel fault coat shield crawl pinched throat chips remote 5. Storm 8. Change ghost 2. Business Job (name) reform cage load collisions (re)born slave broken visions court grave frigid cord safe forgiveness scorn faith submissive divorce castaway delicious reward ricochet riches haste warm suspicious torn kisses ignored 9. Defense finish expense wind 6. Dull bench sulk trench 3. Left Out annulled drenched proud cult friend bound pale revenge count brawl numb content vowed opium condemned

aloud

renowned

aroused

crowned

contempt

martyrdom

crumbs

gun

young
Clichés

Avoid using clichés, they are worn out boring phrasing. The following example shows two different phrases about the same subject and how different and more interesting they can be written.

The generic cliché phrase:	From Yeats:
Noise and confusion, there's no peace	I will arise and go now
In the hustle and bustle of city streets	I hear lake water lapping with low sounds by the shore
It's time to get away from it all	While I stand on the roadway, or the pavements gray,
Deep inside I hear natures call	I hear it in the deep heart's core

Both express roughly the same sentiment, but the first, cliché and generic as it is, can only point to territories of meaning. Yeats takes you there and makes you see it and feel it.

Examples of Cliché Phrases:

(way down) deep inside hand in hand face to face back and forth walk out (that) door feel the pain gotta take a chance touch my (very) soul heart to heart side by side up and down we've just begun can't stand the pain give me half a chance such a long time take my hand eye to eye in and out by my side hurts so bad can't take it last chance night and day take your time the rest of time end of time no one like you say you'll be mine

how it used to be it's gonna be alright set me free work it out true to you kiss your lips falling apart taken for granted lost without you safe and warm broken heart all we've been through end of the line always be true pay the price right or wrong what we're fighting for you know it's true hold me close forget my foolish pride drive me crazy all my dreams come true all night long rest of my life no one can take your place losing sleep

made up my mind get down on my knees end it all had your fun done you wrong back to me make you stay asking too much no tomorrow give you my heart aching heart want you need you love you hold on never let you (me) go rise above all we've done worth fighting for nothing to lose losing sleep treat me like a fool going insane rhyme or reason the test of time someone like you all my love lonely nights

I'll get along calling out your name more than friends fooling around heaven above break these chains take it easy can't live without you somebody else break my heart try one more time can't go on keep holding on now or never over the hill know for sure hold me tight tear me apart play the game see the light oh baby cuts like a knife

Cliché Rhymes

When you hear one of these, no need to lose sleep wondering what's coming next. Boring!

hand/understand/command	change/rearrange	heart/start/apart/part
walk/talk	stronger/longer	wrong/strong/song/long
kiss/miss	eyes/realize/sighs/lies	word/heard
dance/chance/romance	fire/desire/higher	arms/charms/harm/warm
friend/end	burn/yearn/learn	true/blue/through
cry/die/try/lie/goodbye/deny	forever/together/never	pain/rain/same
best/rest/test	ache/break	touch/much
love/above/dove	tears/fears	maybe/baby
hide/inside/denied	door/before/more	knees/please
touch/much	blues/lose	light/night/sight/tight/fight/right
begun/done	lover/discover/cover	take it/make it/fake it/shake it

Cliché Images

These have been aired out so much they are mere whiffs of their former selves:

lips	moon	feel the beat
face	sun going down	bed
soft (smooth) skin	stars	knock
eyes	night	door
hair	tears	flowers
warmth of arms	lock	fireplace
sky	perfume	sweat
smile	dance floor	lying in bed
silky hair	shadow	door
kiss	crying	wall
light	key	rose
hands	chains	telephone
voice	glass of wine	flashing lights

Cliché Metaphors

- Storm for anger, including thunder, lightning, dark clouds, flashing, wind, hurricane, tornado, etc...
- Fire for love or passion, including burn, spark, heat, flame, too hot, consumed, burned, ashes.
- Cold for emotional indifference, including ice, freeze, frozen, etc...
- Light for knowledge or happiness, including shine, sun, touch the sky, blinded by love, and others too numerous to mention.
- Darkness for ignorance, sadness and loneliness, including night, blind, shadows, etc...
- Rain for tears.
- Seasons for stages of life or relationships.
- Walls for protection from harm, especially from love.
- Drown in love.
- Broken heart.
- Prison, prisoner used especially for love, includes chains etc...

Verse Development

Keep your listeners interested all the way through your song. Use basic story telling to set up interest in what is going to happen.

List Of Some Story Based Songs

Wildfire - Michael Martin Murphy
The Ode To Billy Joe - Bobby Gentry
Bad, Bad Leroy Brown - Jim Croce
Cat's In The Cradle - Harry Chapin
Hurricane - Bob Dylan
American Pie - Don McLean
The Boxer - Simon and Garfunkel
Last Kiss - Wayne Cochran
Fast Car - Tracy Chapman
You're So Vain - Carly Simon
Angie Baby - Helen Ready
El Paso - Marty Robbins

The Night The Lights Went Out In Georgia - Vicky Lawrence
You Don't Mess Around With Jim - Jim Croce
Hang Down Your Head Tom Dooley - The Kingston Trio
Puff The Magic Dragon - Peter, Paul and Mary
Me and Bobby McGee - Kris Kristofferson
The Wreck of the Edmund Fitzgerald - Gordon Lightfoot
The Devil Went Down to Georgia - Charlie Daniels Band
The Night Chicago Died - Paper Lace
Play It Again – Luke Bryan
Toes – Zac Brown Band
Drunk On A Plane – Dierks Bentley
A Boy Named Sue – Johnny Cash

Writing Story Based Lyrics

The following is how many stories are divided to build anticipation and drama. The same type of structure can be used in story based songs.

Act (Drama)

An act is a major division of a theatre work, including a play, film, opera, or musical theatre, consisting of one or more scenes.

Three-Act Plays

In a three-act play, each act usually has a different mood. In the most commonly used structure, the first act has a lot of introductory elements (that is, who, what, when, where, why, and how); the second act is usually the darkest, with the antagonists having a greater compass; and the third act has a resolution (denouement), often with the protagonists prevailing.

Act One

The conflict of the story is discovered. The exposition, the introduction of the protagonist and other characters that the protagonist meets, take place, as well as the dramatic premise and inciting incident (the incident that sets the events of the story in motion) occurs approximately halfway through the first act.

Act Two

The main character encounters an obstacle that prevents the character from achieving his or her dramatic need. This is known as the complication. The main character reaches his or her lowest point, seems farthest from fulfilling the dramatic need or objective, and seems to have no way to succeed.

Act Three

The climax occurs as well as the resolution (denouement), a brief period of calm at the end of a play where a state of equilibrium returns.

Three-Act Structure

The three-act structure is a model used in narrative fiction that divides a story into three parts (acts), often called the Setup, the Confrontation, and the Resolution.

Dramatic Question

As the story moves along, the plot usually progresses in such a way as to pose a yes or no question, the major dramatic question. For example, Will the boy get the girl? Will the hero save the day? Will the

detective solve the mystery? Will the criminal be caught by law enforcement and brought to justice? Will the protagonist be murdered by the fugitive? This question must be answered in the climax of the story. The answer is often yes; no; maybe; yes, but...; or no, and what's more...

Structure

The first act, or opening narration, is usually used for exposition, to establish the main characters, their relationships, and the world they live in. Later in the first act, a dynamic incident occurs, known as the inciting incident, or catalyst, that confronts the main character (the protagonist). The protagonist's attempts to deal with this incident lead to a second and more dramatic situation, known as the first plot point, which

- a) Signals the end of the first act,
- b) Ensures life will never be the same again for the protagonist and
- c) Raises a dramatic question that will be answered in the climax of the film. The dramatic question should be framed in terms of the protagonist's call to action, (Will X recover the diamond? Will Y get the girl? Will Z capture the killer?).

The second act, also referred to as "rising action", typically depicts the protagonist's attempt to resolve the problem initiated by the first turning point, only to find themselves in ever worsening situations. Part of the reason protagonists seem unable to resolve their problems is because they do not yet have the skills to deal with the forces of antagonism that confront them. They must not only learn new skills but arrive at a higher sense of awareness of who they are and what they are capable of, in order to deal with their predicament, which in turn changes who they are. This is referred to as character development or a character arc. This cannot be achieved alone and they are usually aided and abetted by mentors and coprotagonists.

The third act features the resolution of the story and its subplots. The climax is the scene or sequence in which the main tensions of the story are brought to their most intense point and the dramatic question answered, leaving the protagonist and other characters with a new sense of who they really are.

Five-Act Plays

Until the 18th century, most plays were divided into five acts. The work of William Shakespeare, for example, generally adheres to a five-act structure.

Introduction

The setting is fixed in a particular place and time, the mood is set, and characters are introduced. A backstory may be alluded to. Introduction can be conveyed through dialogues, flashbacks, characters' asides, background details, in-universe media, or the narrator telling a back-story.

Rise

An exciting force begins immediately after the exposition (introduction), building the rise in one or several stages toward the point of greatest interest. These events are generally the most important parts of the story since the entire plot depends on them to set up the climax and ultimately the satisfactory resolution of the story itself.

Climax

The climax is the turning point, which changes the protagonist's fate. If things were going well for the protagonist, the plot will turn against them, often revealing the protagonist's hidden weaknesses. If the story is a comedy, the opposite state of affairs will ensue, with things going from bad to good for the protagonist, often requiring the protagonist to draw on hidden inner strengths.

Return or Fall

During the Return, the hostility of the counter-party beats upon the soul of the hero. Freytag lays out two rules for this stage: the number of characters be limited as much as possible, and the number of scenes through which the hero falls should be fewer than in the rise. The return or fall may contain a moment of final suspense: Although the catastrophe must be foreshadowed so as not to appear as a non sequitur, there could be for the doomed hero a prospect of relief, where the final outcome is in doubt.

Catastrophe

The catastrophe ("Katastrophe" in the original) is where the hero meets his logical destruction. Freytag warns the writer not to spare the life of the hero. Despite Denouement being attested as first appearing in 1752, it was not used to refer to dramatic structure until the 19th century.

The Protagonist

A protagonist, one who plays the first part, chief actor, is the main character of a story. The protagonist makes key decisions that affect the plot, primarily influencing the story and propelling it forward, and is

often the character who faces the most significant obstacles. If a story contains a subplot, or is a narrative made up of several stories, then each subplot may have its own protagonist.

The protagonist is the character whose fate is most closely followed by the reader or audience, and who is opposed by the antagonist. The antagonist will provide obstacles and complications and create conflicts that test the protagonist, and revealing the strengths and weaknesses of the protagonist's character.

Types of Protagonists

Hero / Heroine

In literary terms, a hero (masculine) or heroine (feminine) protagonist is typically admired for their achievements and noble qualities. Heroes are lauded for their strength, courage, virtuousness, and honor, and are considered to be the "good guys" of the narrative.

Examples include DC Comics' Superman (hero) and Katniss Everdeen from The Hunger Games (heroine).

Antihero

An antihero (sometimes spelled as anti-hero) or antiheroine is a main character in a story who lacks conventional heroic qualities and attributes such as idealism, courage, and morality. Examples include Holden Caulfield from The Catcher in the Rye and Jay Gatsby from The Great Gatsby.

Tragic hero

A tragic hero is the protagonist of a tragedy. Examples include Oedipus from Oedipus Rex and Prince Hamlet from Shakespeare's Hamlet.

Villain Protagonist

The protagonist is not always conventionally good. Contrasting the hero protagonist, a villain protagonist is a protagonist who is a villain, driving the story forward regardless of the evil qualities the main character has. These traits can include being cruel, malicious, and wicked.

Examples include Humbert Humbert in Vladimir Nabokov's Lolita and Richard III in William Shakespeare's eponymous play.

Supporting Protagonist

When a supporting protagonist appears, the story is told from the perspective of a character who appears to be minor. This character may be more peripheral from the events of the story and are not as involved within the "main action" of the plot. The supporting protagonist may be telling the story while viewing another character as the main influence of the plot.

Examples include Nick from The Great Gatsby and Bilbo Baggins from The Hobbit.

Antagonist

An antagonist is a character in a story who is presented as the chief foe of the protagonist.

Types of Antagonists

Heroes and Villains

The antagonist is commonly positioned against the protagonist and their world order. While most narratives will often portray the protagonist as a hero and the antagonist as a villain, like Harry Potter (Character) and Lord Voldemort in Harry Potter, the antagonist does not always appear as the villain. In some narratives, like Light Yagami and L (Death Note) in Death Note, the protagonist is a villain and the antagonist is an opposing hero.

Antagonists are conventionally presented as making moral choices less savory than those of protagonists. This condition is often used by an author to create conflict within a story. This is merely a convention, however. An example in which this is reversed can be seen in the character Macduff from Macbeth, who is arguably morally correct in his desire to fight the tyrant Macbeth, the protagonist.

Examples from television include J.R. Ewing (Larry Hagman) from Dallas and Alexis Colby (Joan Collins) from Dynasty. Both became breakout characters used as a device to increase their shows' ratings.

Other Characters

Characters may be antagonists without being evil – they may simply be injudicious and unlikable for the audience. In some stories, such as The Catcher in the Rye, almost every character other than the protagonist may be an antagonist.

Aspects of the protagonist

An aspect or trait of the protagonist may be considered an antagonist, such as morality or indecisiveness.

Non-personal

An antagonist may not always be a person or people. In some cases, an antagonist may be a force, such as a tidal wave that destroys a city; a storm that causes havoc; or even a certain area's conditions that are the root cause of a problem. An antagonist also may or may not create obstacles for the protagonist. Societal norms or other rules may also be antagonists.

Usage Of Antagonist

An antagonist is used as a plot device, to set up conflicts, obstacles, or challenges for the protagonist. Though not every story requires an antagonist, it often is used in plays to increase the level of drama. In tragedies, antagonists are often the cause of the protagonist's main problem, or lead a group of characters against the protagonist; in comedies, they are usually responsible for involving the protagonist in comedic situations.

Archenemy

An archenemy (or arch-enemy) is the main enemy of someone. In fiction, it is a character who is the hero's (or protagonist's) most prominent and most-known enemy.

Point of View

Narrative point of view. A variety of different theoretical approaches have sought to define point of view in terms of person, perspective, voice, consciousness, and focus. Narrative perspective is the position and character of the storyteller, in relation to the narrative. Who's talking? First person, second person, third person?

First Person

A first-person point of view reveals the story through an openly self-referential and participating narrator. First person creates a close relationship between the narrator and reader, by referring to the viewpoint character with first person pronouns like **I** and **me** (as well as **we** and **us**, whenever the narrator is part of a larger group). That is, the narrator openly acknowledges their own existence. Frequently, the firstperson narrator is the protagonist, whose inner thoughts are expressed to the audience, even if not to any of the other characters. A first person narrator with a limited perspective is not able to witness or understand all facets of any situation. Thus, a narrator with this perspective will not be able to report the circumstances fully and will leave the reader with a subjective record of the plot details.

Second Person

The second-person point of view is a point of view where the audience is made a character. This is done with the use of second-person pronouns like **you**. The narrator may be literally addressing the audience,

but more often the second-person referent of these stories is actually some character within the story. Novels in second person are comparatively rare; rather, this point of view tends to be mostly confined to **songs** and **poems**.

Third Person

In the third-person narrative mode, the narration refers to all characters with third person pronouns like **he**, **she**, or **they**, and never first- or second-person pronouns. This makes it clear the narration is done without the need for a narrator who is identified and personified as a character within the story. For the purpose of comparison to stories that have a narrator, third-person narration is described as having an anonymous narrator.

Traditionally, third-person narration is the most commonly used narrative mode in literature. It does not require that the narrator's existence be explained or developed as a particular character, as would be the case with a first-person narrator. It thus allows a story to be told without detailing any information about the teller (narrator) of the story. Instead, a third-person narrator is often simply some disembodied commentary, rather than a fully developed character.

Examples Of First And Third Person:

I met you on a Saturday Your hair was wound in braids You walked up and you said hello And then you asked my name

First Person Narrative

I met her on a Saturday Her hair was wound in braids She walked up and she said hello And then she asked my name

Third Person Narrative

He met her on a Saturday Her hair was wound in braids She walked up and she said hello And then she asked his name

Examples That Outline And Breakdown Perspective

	First Person	
	Singular	Plural
Subject	I	we
Direct Object	me	US
Possessive Adjective	my	our
Possessive Predicate	mine	ours

In a first person narrative, first person pronouns mix with third person pronouns.

Using The Great Pretender:

O' yes I'm the great pretender	Yes, I'm the great pretender
Pretending that I'm doing well	Adrift in a world of my own
My need is such, I pretend too much	I play the game, but to my real shame
I'm lonely but no one can tell	She's (or He's) left me to dream all alone

	Second Person	
	Singular	Plural
Subject	you	you
Direct Object	you	you
Possessive Adjective	your	your
Possessive Predicate	yours	yours

Second person pronouns are mixed with first person pronouns to produce direct access – contact between I and you.

Using The Great Pretender:

O' yes I'm the great pretender	Yes, I'm the great pretender
Pretending that I'm doing well	Adrift in a world of my own
My need is such, I pretend too much	I play the game, but to my real shame
I'm lonely but no one can tell	You've left me to dream all alone

	Third Person	
	Singular	Plural
Subject	he, she, it	they
Direct Object	him, her, it	them
Possessive Adjective	his, her, its	their
Possessive Predicate	his, hers, its	theirs

e.g. Possessive Adjective: That is her responsibility e.g. Possessive Predicate: The responsibility is hers

Using The Great Pretender:

O' yes she's the great pretender	Yes, she's the great pretender
Pretending that she's doing well	Adrift in a world of her own
Her need is such, she pretends too much	She plays the game, but to her real shame
She's lonely but no one can tell	He's left her to dream all alone

Rhythm Meter

Music Meter

In music, Meter refers to the regularly recurring patterns and accents such as bars and beats. Unlike rhythm, metric onsets are not necessarily sounded, but are nevertheless implied by the performer (or performers) and expected by the listener.

Western music inherited the concept of Meter from poetry, where it denotes: the number of lines in a verse; the number of syllables in each line; and the arrangement of those syllables as long or short, accented or unaccented. The first coherent system of rhythmic notation in modern Western music was based on rhythmic modes derived from the basic types of metrical unit in the quantitative Meter of classical ancient Greek and Latin poetry.

Later music for dances such as the pavane and galliard consisted of musical phrases to accompany a fixed sequence of basic steps with a defined tempo and time signature. The English word "measure", originally an exact or just amount of time, came to denote either a poetic rhythm, a bar of music, or else an entire melodic verse or dance involving sequences of notes, words, or movements that may last four, eight or sixteen bars. Meter is related to and distinguished from pulse, rhythm (grouping), and beats:

Meter is the measurement of the number of pulses between more or less regularly recurring accents. Therefore, in order for meter to exist, some of the pulses in a series must be accented—marked for consciousness - relative to others. When pulses are thus counted within a metric context, they are referred to as beats.

Poetry Meter

In poetry, meter is the basic rhythmic structure of a verse or lines in verse. Many traditional verse forms prescribe a specific verse meter, or a certain set of meters alternating in a particular order. The study and the actual use of meters and forms of versification are both known as prosody.

When you first start learning music, especially when you're learning from chord charts with lyrics, you'll notice that more often than not, words are separated by their syllables to coincide with the time of the music. This is because music lyrics are often poetic and adhere to a rhythm.

Before defining poetry meter, it is important to understand a few definitions: The following Latin terms are used to describe a variety of bisyllabic and trisyllabic combinations:

amphibrach	antidactylus	dactyl	pyrrhic
amphimacer	bacchius	dibrach	spondee
anapaest	choree	iamb	tribrach
antibacchius	cretic	molossus	trochee

S = Short Syllable - Unstressed

L = Long Syllable - Stressed

Disyllables			Trisy	llables	5	
S	S	pyrrhic, dibrach	S	S	S	tribrach
S	L	iamb	S	S	L	anapaest, antidactylus
L	S	trochee, choree	S	L	S	amphibrach
L	L	spondee	S	L	L	bacchius
			L	S	S	dactyl
			L	S	L	cretic, amphimacer
			L	L	S	antibacchius
			L	L	L	molossus

lambic

An iamb or iambus is a metrical foot used in various types of poetry. Originally the term referred to one of the feet of the quantitative meter of classical Greek prosody: a short syllable followed by a long syllable (as in "a-bove"). This terminology was adopted in the description of accentual-syllabic verse in English, where it refers to a foot comprising an unstressed syllable followed by a stressed syllable (as in a-bove).

In accentual-syllabic verse an iamb is a foot that has the rhythmic pattern: da - DUM

The following notation uses the "x" to denote an unstressed syllable, and the "/" symbol is used to denote a stressed syllable:

x / da - DUM

The word 'attempt' is a natural iamb: x

x / at – tempt

Types of lambic Meter

Dimeter	lambic dimeter is a meter referring to a line consisting of two iambic feet.						
	x / x /						
	The way a crow						
	x / x /						
	Shook down on meRobert Frost, "Dust of Snow"						
Trimeter	lambic trimeter is a meter referring to a line consisting of three iambic feet.						
	Theodore Roethke, "My Papa's Waltz"						
	x / x / x /						
	We romped un-til the pans						
	x / x / x /						
	Slid from the kitch-en shelf						

Emily Dickinson, "The Only News I Know"

x / x / x /
The on-ly news I know
x / x / x /
Is bull-e-tins all day

Tetrameter	lambic tetrameter is a meter referring to a line consisting of four iambic feet:
	Lord Byron, "She Walks in Beauty" x / x / x / x / She walks in base-ty like the night
	she walks in beau-ty, like the hight x / x / x / x / Of cloud-less climes and star-ry skies
Pentameter	lambic Pentameter is a meter referring to a line consisting of five iambic feet:
	Alfred Tennyson, "Ulysses"
	x / x / x / x / x / To strive, to seek, to find, and not to yield.
	William Shakespeare, Sonnet 18
	x /x / x / x /
	Shall I com-pare thee to a sum-mer's day?
	Although, it could be argued that this line in fact reads:
	/ / x / x / x / x /
	Shall I com-pare thee to a sum-mer's day?

Meter is often broken in this way, sometimes for intended effect and sometimes simply due to the sound of the words in the line. Where the stresses lie can be debated, as it depends greatly on where the reader decides to place the stresses. Although in this meter the foot is no longer iambs but trochees. **Hexameter** lambic hexameter is a meter referring to a line consisting of six iambic feet. In English verse, "alexandrine" is typically used to mean "iambic hexameter"

Michael Drayton, Poly-Olbion

x	/	x	1		x	/	x	/	х	1	x	/	
Ye	sac	-rec	B	ards,	tha	at to	your	harps	m	e -l	o- diou	s s t	trings
/	х	/	,	x	/	x	/	x	/	x	/	x	/
Sur	ıg t	h' a	n–	cient	He	-roes'	deeds	; (the	mo	-nu	-ments	of	Kings)

Heptameter lambic Heptameter is a meter referring to a line consisting of seven iambic feet:

A. B. Paterson, The Man from Ironbark
x / x / x / x / x / x / x / x /
I s'pose the flats is pret-ty green up there in I-ron-bark.

Common Meter

Common Meter or common measure is a poetic Meter consisting of four lines that alternate between iambic tetrameter (four metrical feet per line) and iambic trimeter (three metrical feet per line), with each foot consisting of an unstressed syllable followed by a stressed syllable.

Common Meter has been used for ballads such as "Tam Lin" and hymns such as "Amazing Grace" and the Christmas carol "O Little Town of Bethlehem". The upshot of this commonality is that lyrics of one song can be sung to the tune of another. Historically, lyrics were not always wedded to tunes and would therefore be sung to any fitting melody; "Amazing Grace", for instance, was not set to the tune "New Britain" until fifty-six years after its initial publication in 1779.

Ballad Meter

Like common Meter, ballad Meter comprises couplets of tetrameter (four feet) and trimeter (three feet). However, the feet need not be iambs (with one unstressed and one stressed syllable): the number of unstressed syllables is variable. Ballad Meter is "less regular and more conversational" than common Meter.

In each stanza, ballad form typically needs to rhyme only the second lines of the couplets, not the first, in the form A-B-C-B (where A and C need not rhyme), while common Meter typically rhymes both the first lines and the second lines, in the pattern A-B-A-B.

The Ballad of Reading Gaol by Oscar Wilde

He does not rise in piteous haste To put on convict-clothes, While some coarse-mouthed Doctor gloats, and notes Each new and nerve-twitched pose, Fingering a watch whose little ticks Are like horrible hammer-blows.

Common Meter Double and Particular

Another common adaptation of the common Meter is the common-Meter double, which as the name suggests, is the common Meter repeated twice in each stanza, or 8.6.8.6.8.6.8.6.8.6. Traditionally the rhyming scheme should also be double the common Meter and be a-b-a-b-c-d-c-d, but it often uses the ballad Meter style, resulting in x-a-x-a-x-b-x-b. Examples of this variant are "America the Beautiful" and "It Came Upon the Midnight Clear". Likewise related is the common particular Meter, 8.8.6.8.6.

Common Meter is often used in hymns, like this one:

Amazing Grace	Amazing Grace, how sweet the sound,
by John Newton	That saved a wretch like me!
	I once was lost, but now am found,
	Was blind , but now I see .

A modern example of ballad Meter is the theme song to Gilligan's Island, infamously making it possible to sing any other ballad to that tune. The first two lines actually contain anapaests in place of iambs. This is an example of a ballad Meter which is metrically less strict than common Meter.

The Ballad of Gilligan's Island	House of the Rising Sun
Just sit right back and you'll hear a tale ,	There is a house in New Or- leans ,
a tale of a fate- ful trip .	They call the ris -ing sun .
That star -ted from this trop- ic port ,	And it's been the ruin of many a poor girl ,
a- board this tin- y ship .	And God , I know I'm one .

Common Meter Double, using a standard CM rhyme scheme for the first iteration, and a Ballad Meter scheme for the second.

America the Beautiful	It Came Upon a Midnight Clear
by Katharine Lee Bates	by Edmund Sears

O beautiful for spacious skies,	It came upon a midnight clear
For amber waves of grain,	That glorious song of old
For purple mountain majesties	From angels bending near the earth
Above the fruited plain!	To touch their harps of gold
America, America,	Peace on the earth, good will to men
God shed his grace on thee	From heaven's all gracious King
And crown thy good with brotherhood	The world in solemn stillness lay
From sea to shining sea.	To hear the angels sing.

How Common Meter is Applied To Music

It is often represented in 8 bars.

The Rhythm:

Line 1	Beat	Bar 1 1	2	3	4	Bar 2 1	2	3	4	
	Note Stress	/ DUM	x da	/ DUM	x da	/ DUM	x da	/ DUM	ş	4 Stresses
Line 2	Beat	Bar 3 1	2	3	4	Bar 4 1	2	3	4	
	Note Stress	/ DUM	x da	/ DUM	x da	/ DUM	\$	ş	ş	3 Stresses
Line 3	Beat	Bar 5 1	2	3	4	Bar 6 1	2	3	4	
	Note Stress	/ DUM	x da	/ DUM	x da	J / DUM	x da	/ DUM	\$	4 Stresses
Line 4	Beat	Bar 7 1	2	3	4	Bar 8 1	2	3	4	
	Note Stress	/ DUM	x da	/ DUM	x da	/ DUM	ş	\$	\$	3 Stresses

Other Meters

As we saw with common meter, it typically organizes music into a single 8 bar unit running (2 bars + 2 bars) + (2 bars + 2 bars) The second line of common meter, comprising bars 3 and 4, contains only three stresses, keeping the entire system moving until it is matched at line four (bars 7 and 8). When you want to organize into 4-bar units rather than 8-bar units, all you have to do is match bars 1 and 2 with bars 3 and 4.

Here's the Paradigm:

DUM da DUM da DUM da DUM	4 Stresses
DUM da DUM da DUM da DUM	4 Stresses
DUM da DUM da DUM da DUM	4 Stresses
DUM da DUM da DUM da DUM	4 Stresses

Example:

Ee-nie mee-nie min-ey moe	4 Stresses
Catch a tig-er on the toe	4 Stresses
If he hol-lers make him pay	4 Stresses
Fif-ty dol-lars eve-ry day	4 Stresses

The lines are four-stress balanced lines called couplets. They move differently. There's no problem stopping after line 2. Common Meter, with its 4-stresses followed by 3-stresses gives us an I.O.U., while the matched phrases of couplets let us stop.

Using Couplets

Couplets usually rhyme, marking stopping places for the ear. They form a lyrical and musical unit, typically four bars long. they move us forward in regular, balanced steps with four stressed notes in each 2-bar section.

		Bar 1				Bar 2				
Line 1	Beat	1	2	3	4	1	2	3	4	
	Note]]]			¥	
	Stress	/ DUM	x da	/ DUM	x da	/ DUM	x da	/ DUM		4 Stresses
		Bar 3				Bar 4				
Line 2	Beat	1	2	3	4	1	2	3	4	
	Note]]]	J	ş	
	Stress	/ DUM	x da	/ DUM	x da	/ DUM	x da	/ DUM		4 Stresses

Lines 3 and 4 are the same as lines 1 and 2. You can easily extend from four lines to six lines without getting too far off balance.

Example With Six Lines:

Claire had all but giv-en up	4-Stresses
When she and Ed-win fell in love	4-Stresses
She touched his face and shook her head	4-Stresses
In dis-belief she fin-ally said	4-Stresses
In many dreams I've held you near	4-Stresses
Now at last you're fin-ally here	4-Stresses

The feeling is slightly unstable, since we have an odd number of couplets, yet an even number of lines, a subtle and interesting verse structure. You can use it to create a strong sense of center, yet raise expectations that something else is coming.

You can also use a couplet at the end of a section of common meter for acceleration and contrast:

Claire had all but giv-en up	4-Stresses
Then fell in love with Ed	3-Stresses
She touched his face and closed her eyes	4-Stresses
In dis-belief she said	3-Stresses
In many dreams I've held you near	4-Stresses
Now at last you're fin-ally here	4-Stresses

The ending couplet creates a real sense of interest and arrival. You can use couplets to set up expectation of balance, then take a different route. Here is an example of using couplets that end with common meter set of lines:

Tank is full, switch is on	4-Stresses
Night is warm, cops are gone	4-Stresses
Rock-et bike is all her own	4-Stresses
It's called a Hurr-i-cane	3-Stresses
She told me once it's quite a ride	4-Stresses
It's shaped so there's this place in-side	4-Stresses
Where if you're mov-ing you can hide	4-Stresses
Safe with-in the rain	3-Stresses

The odd fourth line stands out because we expected a four-stress rhymed couplet. Instead we get a three-stressed unrhymed line, handing us an IOU that isn't cashed in until the eighth line. It's a good way to create a seamless eight-line, sixteen bar, section.

Without Couplets

What happens when four-stress lines aren't rhymed in couplets? Look at the following section from The End of the Innocence by Don Henley and Bruce Hornsby:

Remem-ber when the days were long	4-Stresses
And rolled beneath a deep blue sky	4-Stresses
Didn't have a care in the world	4-Stresses
With mommy and dad-dy stand-in' by	4-Stresses

With balanced four-bar phrases that settle gently, rather than asking for forward motion. After we've seen only the first two lines there is no urgent push forward, as there would have been if the lines were unmatched. Here's an example using the nursery rhyme Mary Had A Little Lamb:

Ma-ry had a lit-tle lamb	4-Stresses
Whose fleece was white as snow	3-Stresses

The lack of a fourth stress pushes forward, while the matched four stresses don't

Ma-ry had a lit-tle lamb	4-Stresses
Whose fleece was white as deep-est snow	4-Stresses

Instead we just roll smoothly along, with no anticipation.

Rhyme Scheme

Rhyme scheme is the pattern of rhyming words in the lyrics. In a four line phrase, there are a few possibilities. If we label the lines 1, 2, 3 and 4:

- Line 1 rhymes with line 2, 3 and 4.
- Line 1 rhymes with line 3, line 2 rhymes with line 4.
- Line 1 and 3 don't rhyme, line 2 rhymes with line 4.

In the following lyric, lines 1 and 4 don't rhyme, but lines 2 and 4 rhyme with 'sky' and 'by':

	Rhyme Scheme	
Remem-ber when the days were long	x	4-Stresses
And rolled beneath a deep blue sky	а	4-Stresses
Didn't have a care in the world	x	4-Stresses
With mommy and dad-dy stand-in' by	а	4-Stresses

The next verse lines 1, 2 and 3 each rhyme with each other with 'fails', 'tales' and 'details'. There is an acceleration, a strong pressure building forward here.

	Rhyme Scheme	
When "happily ev-er aft-er" fails	b	4-stresses
And we've been poisoned by these fairy tales	b	4-stresses
The lawyers dwell on small de-tails	b	4-stresses
Since daddy had to fly	С	3-stresses

If we look at this from the beginning, there are seven lines in a row with four stresses, the eighth line with three stresses creates an I.O.U. to be resolved, but isn't until sixteen lines later, after the pre-chorus, a chorus and the entire second verse have occurred. The balanced lines followed by an unbalanced line can create a great sense of expectation.

It's interesting that the last line of the verse, "Since daddy had to fly" sounds unrhymed. It should rhyme with "sky" and "by" in lines two and four, but since the first four lines close off to form a unit, we won't here the connection.

The next four lines move into common meter. After all the four stress couplets in the verse, the contrast is stark:

	Rhyme Scheme	
But I know a place where we can go	х	4-Stresses
Still un-touched by man	d	3-Stresses
We'll sit and watch the clouds roll by	x	4-Stresses
And the tall grass waves in the wind	d	3-Stresses

The section moves in a completely different way, in a four line unit rather than two by two. We get a simultaneous effect of speeding up (with shorter second and fourth lines), and slowing down (less frequent rhymes). It's a great contrast to use for this transitional section (or pre-chorus), preparing us to go back to four stress lines:

	Rhyme Sc	heme
You can lay your head back on the ground	а	4-Stresses
And let your hair fall all around me	а	4-Stresses
Of-fer up your best de-fense	b	4-Stresses
But this is the end,	b	2-Stresses
This is the end of the inno-cence	b	4-Stresses

All the mixing and matching of four stress couplets and common meter has led to this chorus. Here's the payoff for all the balanced lines and even number of bars. With a simple move of inserting only a piece of the last line, "but this is the end" everything is thrown off balance. There are now an odd number of lines in the chorus. There is an odd rhyme scheme. There is a two-stress line for the first time. And the chorus stretches beyond the eight-bar units we saw in the verse and pre-chorus into eleven bars. An effective way to showcase the title. Throwing it off balance keeps it from closing solidly, supporting the emotion of the idea, a sort of bittersweet longing that feels a little airy and suspended, matching the structural asymmetry perfectly. It works well. And all done in couplets and common meter.

Building Structure with Prosody

Prosody means reading with expression, with the appropriate rhythm, tone, pitch, pauses, and stresses for the text. Prosody depends on both accuracy and rate. In order to read with expression, a person must be able to read words efficiently and break the text into meaningful syntactic and semantic units.

Your tools for designing your lyric's shapes are phrase lengths, rhythms and rhyme schemes. For example, say there's a place in your verse where emotion gets pretty active or intense. You might try putting rhymes (both phrase-end and internal rhyme) close together, and try using short phrases. Like this:

	Rhyme Scheme
You can't play ping-pong with my heart	а
You dominate the table	b
My nerves are shot, you've won the set	с
Your curves have got me in a sweat	с
My visions blurred, can't see the net	с
I'm feeling most unstable	b

Consecutive rhymes "set, sweat, net" slam the ideas home. Internal rhymes "nerves, curves, blurred" and "shot, got" put us into overdrive. The acceleration creates prosody: the mutual support of structure and meaning, form follows function.

The Principle of Contrast

Verses in a song should all have the same function, they develop the plot, characters, or situations of the song. That's why they're called verses. Because the verses all have the same function, they should all have the same form. When you move from a verse to another function, for example, to a chorus function (commentary, summary), the form should change, they rhyme scheme, phrase lengths, number of phrases, or rhythms of phrases. Maybe all four. This contrast creates interest for the listener. You may have noticed when listening to many songs that the contrast isn't often just with the structure of lyrics, but also with the song's chord progression and how the drums are played.

Other Ways To Write Lyrics

Melody First Approach

If you watched Peter Jackson's documentary on The Beatles during the creation of the album Let It Be, you would have seen several different methods the members used to create songs. One of the more impressive scenes is where Paul McCartney writes the song Get Back while noodling around on his bass. He gets the basis of the song with the harmony and melody within about fifteen minutes. The lyrics at that point were more or less a basis rhymically of what they'd become in the final version. In many interviews Paul would refer to this style of creating lyrics as Scrambled Eggs.

Word Salad or Scrambled Eggs

The idea is to create a rhythm in your head and from that create a rhythm of lyric syllable placeholders perhaps with the rhyming suffix. The place holders can be whatever you think of. A good way to do it might be with using a common phrasing for rhythm like ta-DUM to show where the emphasis lies. This can be synchronized with a drum track's beats. According to Paul McCartney, many Beatles songs started out as word salad.

What Comes First

The truth is that it doesn't matter how it is assembled so long as it sounds good in the end. There are lots of ways that a songwriter can write a song. Here are some different approaches that musicians have done:

Lyrics First	This might be described as how Elton John writes songs. Bernie Taupin would supply him with lyrics and Elton would write the harmony and melody for them.
Melody First	With this approach, the melody would need lyrics and harmony and rhythm.
Harmony First	In this approach the writer starts with a chord progression and writes the melody, lyrics and perhaps the rhythm.
Rhythm First	This might be the least used approach unless you're a drummer perhaps or a rapper. With this approach, the song starts out as a beat.

Song Form

Verse	Verse	Chorus	Verse	Verse	Chorus

This is one of the most common forms of songs. The problem with this simple formula is that it can become repetitive. This doesn't mean you should avoid it completely, because for many songs this works very well. As the Beatles became better song writers, their songs became more varied and added more contrast. The contrast can come in the form of a bridge or refrain. They often combined different ideas that had been the parts of songs in their own right. You can definitely hear this in songs like A Day In The Life or You Never Give Me Your Money and some of Paul's songs with Wings like Uncle Albert or Band on the Run.

Song Building Blocks

When songs are written, they are based upon a song structure (song form) that uses a number of common sections. These sections are the building blocks of songs. When discussing song-form these sections are assigned letters as labels, rather than verse, chorus and bridge.

Intro - Introduction	Sets up the song
Verse	The main theme of the song. In story based lyrics, where the story happens. Verses can repeat or be completely original.
Pre-Chorus or Rise or Climb	Not all songs have a pre-chorus. The purpose of the pre-chorus is to rise into the chorus. It can be used to build anticipation.
Chorus	The climatic main hook of the song. Can have different lyrics, but is most often the same lyrics repeated
Refrain, Bridge Or Middle Eight	A section that is melodically and harmonically different from the verse and chorus. Often a pull back from the drive of the song.
Solo, Inst Break	An instrumental section. Can be original, a repeat of verse chords or repeat of chorus chords.
Ad Lib or Jam	A break where the music is free flowing without pre-definition.
Coda or Outro	The exit of the song.

Song Structure - AABA

If you've heard any rock/pop song from 1950 on, there is like a 95% chance it will follow the order of :

Intro / Verse1 / Chorus1 / Verse2 / Chorus2 / Bridge / Chorus3 / outro Or Perhaps: Intro / Verse1 / Chorus1 / Verse2 / Chorus2 / Middle 8 / Chorus3 / Chorus4 / Coda

The first song might be described as ABABCB, while the second might be described as ABABCBB.

This formula is exactly as it looks. The song opens with the first verse which leads into the first chorus. Then the second verse leads to a second chorus. At that point the song would go to a bridge, which will typically go somewhere new musically and the bridge can be sung lyrically or played as an instrumental lead. From the bridge the song goes to the final chorus before ending.

Usually there are several verses made up of 8 lines with the last line preparing the listeners for the chorus. The chorus is the part of the song that often sticks to the mind of a listener because it contrasts with the verse and is repeated several times.

The title of the song is usually included in the chorus as well as the main theme. One important rule of thumb when writing the verse/chorus song is to try to get to the chorus quickly, so avoid writing verses that are too long. Stretch the phrases to fill the time gaps since the duration of one line of song text at 96 BPM is five seconds long.

Popular songs often follow one of the traditional song forms, or one of the song forms that are derived from one of the traditional song forms. These music forms are generally made up of a number of sections that may or may not be repeated with the same song.

This will explain fundamentals of **AABA Song Form**, also called **American Popular Song Form** and **Ballad Form**, and provides examples of it being used in popular songs.

What Is A Bridge (AABA Song Form)?

In the AABA song form, the bridge (B) is musically and lyrically different from the A section. In AABA form, the bridge provides a contrast in the song, breaking up the repetitive nature of the verse melodies and rhythms before the transition to the last A section.

What Is A Bridge (Verse / Chorus / Bridge Song Form)?

In the Verse / Chorus / Bridge Song Form the bridge functions differently. Typically it is shorter than the verse and can either contain lyrics or a solo. Lyrically, it should offer a twist, or an explanation that helps make sense of the meaning of the verse lyrics, or on some occasions offer a stronger connection between the verses and the chorus. A bridge in this form also tends to differ in melodic, lyrical and rhythmical terms from the other sections of the song. A common place for a bridge in this song form is after the second chorus.

What Is A Middle-Eight?

A Middle-Eight is a specialist type of bridge section. In music theory, middle eight refers to the B section of a 32-Bar Song Form song, which is 8 Bars in length (hence middle eight). It has a significantly different melody, rhythm and harmony from the "A" section specifically, and the more generally, the whole song. It is the B in an AABA song, in an AB (Verse / Chorus) song the middle eight is usually placed after the second chorus.

Middle Eight sections usually use new chord progressions. It is called a middle 8 because it happens in the middle of the song and the length is generally 8 bars. Middle Eights introduce a contrast with the rest of the song. Many early solos were played during the middle eight.

The Perfect Length For A Pop Song

The majority of radio-friendly pop songs clock in around three minutes, with some drawing nearer to the four-minute mark. Mathematically the common AABA structures often results in a three-minute tune, depending on tempo (three 16-bar verses, three 8-bar choruses and an eight-bar bridge, all played at 120 beats per minute equals two minutes and 28 seconds). Slow down the tempo with this formula and the song becomes longer. For example with a 100 BPM tempo the song clocks in at 2 minutes and 57.6 seconds.

Verses	+	Cł	noruses	+	Bridge	=	Number of	Bars	6
(3 x 16)	+	(3	x 6)	+	(8)	=	(48) + (18)	+ (8)	= 74 Bars
Number	of Ba	rs	x	Beats	per Bar			=	Number of Beats in Song
74 Bars			х	4 Bea	ts / Bar			=	296 Beats
# Beats		1	Beats p	oer Mir	nute =	Time	e in Minutes	=	Time in Minutes
296 Beat	S	/	120 BP	М	=	2.46	6 Minutes	=	2 Minutes, 28 Seconds

Song Writing Tools

Notebooks

A place to write down ideas, lyrics, chord progressions, melody, word phrases, metaphors, other ideas, etc...

Rhyming Dictionary

Not all songs rhyme, but many, if not most, do rhyme. A rhyming dictionary makes it a lot easier to come up with good rhymes.

Thesaurus

Lyrics can be boring if all you're using are common words, phrases and colloquiums. Use the thesaurus to find other, often more interesting ways to say what you want to say.

Dictionary

It helps to know what the specific definition of words are.

Having a Large Vocabulary

Whenever you're reading something and you come across a word that you're unfamiliar with or you have an idea what it means, but not specifically, look it up and write it down. Constantly try to increase your vocabulary. The more words you know, the better writer you will be.

Metaphors and Simile

Songs very often use metaphors and sometimes simile to convey an idea. Constantly think of new interesting metaphors and similes.

RHYTHM

Songs aren't just melody and harmony, but also rhythm. Try to start thinking of song parts in number of bars. This can be made a lot easier by using a metronome or a click/rhythm track. Even if your intension is to not have any accompanying rhythm track, it's still a good practice to work with rhythm.

The purpose of studying rhythm here is to be able to create songs with programmed rhythm tracks. The goal is to create parts that sound as organic as possible. In order to do that it helps to study those different elements that you need in writing a good song rhythm track.

Some Terms:

- Beat The core beat of the rhythm without any improvisation. A song may have the same core beat throughout the length of the song, or it may have different core beats for each section. For example in an AABA song, there might be a different beat for the A sections than the B section.
- Fill An often improvised set of beats that is different from the core beat. Fills are most often done at the transition of parts. In an AABA song, rhythm fill would most likely be at the end of each A section. There might be a different fill at the transition from the A section to the B section.
- Meter The meter of a song is how a song is broken down into measures. Most rock and folk songs are in 4/4 time which is also known as common time. The song meter is indicated by a fraction. 4/4 Time means each measure is four beats and the beats are quarter notes. A song that is in 3/4 time, also known as Waltz Time, there are three quarter note beats to a measure.
- Swing Swing is a hard thing to define. It has to do with the bounce that a rhythm has. Most modern drum apps and machines allow you to adjust the level of swing. If you're programming drums, the most effective way to program swing is to use triplets where the middle note is a rest.

Rhythm Instruments

A Conventional Drum Kit



1 - Bass drum 5 - Hi-hat

9 - China cymbal

- 2 Floor tom6 Crash cymbal
- 3 Snare drum7 Ride cymbal
- 4 Tom-tom 8 - Splash cymbal

Other rhythm Instruments



Drums vs. Percussion

Technically drums are a percussion instrument, but often when the term percussion is used, it's in reference to things like shakers, tambourines, cabasa, et al. It's not uncommon for a band to have a drummer and a percussionist.

Programming Drums

Nothing can replace the sound, feel and groove of a real drummer, but for those without the means to either play their own drum parts or have access to a good drummer, the only choice is to create your own drum parts. The desire is to create drum parts that sound natural. The best way to program drums where you desire it to feel as organic as possible is to consider things from a drummer's perspective.

Human Limitations

A drummer has two arms and two legs. Keep that in mind when programming drums. There are limits to what can be done with four limbs.

Programming Fills and Turnarounds

When programming a fill or turnaround, a live drummer will usually use two hands. This means that if there is a steady beat on, for example, the hi-hat, and the fill is to played on the snare or toms, then the drummer will need to stop the steady hi-hat beat to play the fill. In the following example, the first measure is the basic beat of the song. The second measure has a fill at the end of it. Note that the pattern on the hi-hat is ceased to play the fill.



Limit Perfection

By nature programmed drums keep perfect time, but humans are not so perfect. While some really good drummers may sound like they are perfect, there is variation in how hard they strike a surface and variation in the rhythm timing too. Programming imperfection into your rhythm tracks is not easy to do. Many modern apps allow you to adjust levels of imperfection into tracks by varying the strike velocity and the timing.

Drum Notation



RHYTHM



Drum Modifiers change the way you strike a drum or cymbal. Our Master Drum Key shows these modifiers in the snare drum space, but they can apply to any drum or cymbal. For example, you may find a ghost on a tom stroke, hi-hat stroke, bass drum stroke, etc.

Term	Description
Cross-stick:	A stroke played with the butt of the stick against the rim while the tip of the stick remains resting on the drum head. Grip the stick in between your thumb and index finger. On the down-stroke, your remaining the fingers will touch the drum head. On the up-stroke, be sure that the tip of the stick remains on the drum head.
Ghost:	A very quiet stroke. You can think of a ghost stroke as a light tap (or drop) against the head. Generally, ghost strokes are played with the stroke starting at about 2 inches above the drum head.
Accent:	An accented stroke is to be played louder than other strokes. In other words, it should stand out.
Marcato:	A marcato is a type of accent, but the marcato stands out even more than a normal accent. You can think of a marcato as a 'strong accent.'
Flam:	In a right-handed flam, the left stick plays a quiet grace stroke slightly before the right stick plays the main, primary stroke. Traditionally, a flam should be played with one motion (i.e. both hands move at the same time). The stick you're playing the grace stroke with should start about 2 inches above the drum head while the primary stroke starts in normal position.
Drag:	A drag is sometimes referred to as a ruff. You can use the terms interchangeably. The drag is very similar to a flam but the drag has 2 grace strokes instead of 1. The grace strokes can be achieved by bouncing the stick, or for a more orchestral sound you can play the grace strokes as a buzz against the drum head.

Rimshot:	A rimshot is played by striking both the head of the drum and the rim of the drum at the same time. The tip of the stick strikes the drum head, generally just off-center, and the shaft of the stick strikes the rim. This produces a higher-pitched, louder (and often 'ringy') sound. You can experiment with moving the tip of the stick closer to the edge of the drum head to product different sounds.
Click sticks:	Strike the sticks together. Usually, the left stick stays stationary while the right stick strikes the left stick (if you're a right handed drummer).
Rim:	Play the rim of the drum. For the snare drum, the rim is usually hit at the point where it's furthest away from the drummer (i.e. the 'top'). For toms, the rim is usually struck at the closest point to the drummer (i.e. the bottom). These are not hard and fast rules, however. It's ok to experiment with where you hit the rim.
Electronic pad:	In today's music, electronic drums are becoming more and more common. Hybrid combinations where a drummer is using both acoustic drums and electronic drums are also becoming common. Sometimes, only certain sections of the song use electronic drums. A square note head indicates that this drum is supposed to be played on an electronic drum (or pad). If you don't have an electronic drum, it's ok to play the part on your standard acoustic drums.

Cymbal Modifiers



Crash ride Crash w/tip Crash bell Choke crash Let ring Splash HH Loose HH Open HH Closed HH Open/close HH

At times, special instructions need to be given to the reader regarding how to hit a cymbal. Cymbals are very dynamic and produce distinct sounds depending on how they are hit. Below are cymbal modifiers that we use to communicate how to hit the cymbals.

Crash ride This indicates that the ride should be hit with the shoulder of the stick on the edge of the cymbal. In other words, hit it the same way you would hit a crash cymbal to make it "crash."

100	RHYTHM						
Ride bell	Play the ride bell. To produce a louder sound, you can play the ride bell with the shoulder of the stick rather than with the tip.						
Crash w/tip	Hit the crash cymbal on the bow with the tip of the stick. A Crash w/tip should sound (and feel) similar to playing a normal ride cymbal stroke. It shouldn't "crash."						
Crash bell	Hit the crash cymbal on the bell, either with the tip of the stick or with the shoulder of the stick to produce a louder sound.						
Choke crash	Hit the crash cymbal as usual (i.e. with the shoulder of the stick on the edge of the cymbal), producing a crash. Then, choke the cymbal by grabbing it with your other hand, cutting off the sound. For an advanced choke, you can both hit the crash and catch it with the same hand.						
Let ring	Cymbals are meant to let ring out unless some other type of instruction has been given. For example, a cymbal choke or hi-hat close. However, sometimes including the "let ring" symbol (i.e. an unconnected tie) makes it clearer to the reader and reinforces that the cymbal is to let ring. It is especially helpful if there are rests after the crash cymbal. Telling the reader to let the cymbals ring out throughout those rests gives the reader extra confidence.						
Splash HH	The hi-hat splash is achieved by hitting the hi-hat cymbals together with the foot, and then quickly releasing them apart to let them ring out. It's similar to an orchestral crash cymbal.						
Loose HH	The slashed circle above a hi-hat stroke means to play the hi-hat "loose." In other words, instead of pressing the hi-hat pedals together tightly, lift up on the pedal a little to allow the cymbals to reverberate when hit. This gives a "loose" sound.						
Open HH	The open hi-hat is indicated by a circle above the note head. This means that the two cymbals should be "open" (or not touching) when the hi-hat is hit.						
Closed HH	A hi-hat should be played "closed" by default. That means both cymbals will be pressed together when striking the hi-hat. However, sometimes it's important to reinforce to the reader that the hi-hat stroke needs to be played closed. When you see a + above a hi-hat stroke, it means that stroke should be played "closed."						
Open/close HH Strike the hi-hat in "open" position (i.e. the top and bottom cymbal are not touching). Then, quickly close the hi-hat. This creates a fast attack with the open hi-hat, but then chokes the sound quickly by pressing the hi-hat cymbals together.

Section Modifiers

Section Modifie	ers						
tight	closed	relaxed	loose	Crash Ride	<i>d</i>	looser	1
Ĵ	Ĵ	Ĵ	Ĵ	Ĵ	× ×		
-11				^			

Fixed hi-hat tension/ride modifier for a section

Loose HH for several notes Loosen hi-hat

When a modifier is to be applied to many (or all) of the cymbal strokes in a section, we use a "section modifier" to communicate that the entire section should be played a certain way. This keeps our sheet music clean and clear.

Tight	Play the hi-hat with the cymbals clamped tightly together.
Closed	Play the hi-hat with the standard amount of pressure, closing them enough so that they don't reverberate.
Relaxed	Play the hi-hat with a 'relaxed' tension, allowing the hi-hat cymbals to reverberate slightly.
Loose	Play the hi-hat with a loose tension, allowing the cymbals to reverberate greatly.
Crash Ride	Play the ride cymbal as if you were crashing a crash cymbal, with the shoulder of the stick hitting the edge of the cymbal.
Loose HH	Loose HH for several notes: A line placed next to a loose hi-hat cymbal extends the loose hi-hat section for multiple strokes. Any strokes under the line should be played with a loose hi-hat. This method keeps the sheet music looking cleaner without the need for multiple loose hi-hat symbols in a row.
Loosen hi-hat:	The technique is a commonly used technique to "build" into a section of the song or transition between two parts. Start the section with a slightly loose hi-hat, and gradually loosen the hi-hat tension for all of the strokes under the dotted line.



Rolls

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- Buzz roll/
 A closed roll is played by buzzing the sticks rather than playing clean double

 Closed roll
 strokes (i.e. diddles.) This roll is either referred to as a buzz roll, closed roll or sometimes an "orchestral" roll. In our sheet music, we use the Z symbol on the note stem to clearly indicate when you should use buzz strokes over diddles. In the graphic above, the "Buzz roll/Closed roll (written out)" shows all of the strokes written out in 16th-note notation (with buzzes).
- Single-stick buzz This stroke is played by pressing the tip of the stick against the head creating a "buzz" sound. See the video example above for "Buzz roll/Closed roll" for an example of how to play a "buzz" stroke.
- Crushed buzz A crushed buzz roll is achieved by "buzzing" both sticks on the drum head at the same time. Preferably, try to let the sticks "buzz" for the duration of the note. In the graphic above, the "crush" symbol is over a quarter note. So, you'd let those sticks buzz for one entire beat.
- Slowing Down /Sometimes, a roll gradually speeds up. The 'feathered beams' indicate whetherSpeeding Upthe selection should speed up or slow down.
- Crescendo rollA crescendo roll starts quietly and gradually gets louder until the end of the roll.The crescendo will have to be quick on shorter-duration rolls. Be sure to play the
crescendo consistently, avoiding getting too loud to quickly (or vice versa).

RHYTHM

Drop-away buzz The drop-away buzz starts loud (i.e. forte) but immediately drops off to quiet (i.e. piano).

Bass 1 & Bass 2

Bass 1 is the standard bass drum played with the primary bass drum pedal. Bass 2 is played either on a secondary bass drum or on the same bass drum with the slave pedal of a double bass drum pedal.

Extra Toms



Drum Parts:



Blue Kit: (left to right) Floor Tom Ride Cymbal Kick Drum (aka Bass Drum) Snare (behind and below Tom drum) Tom Crash Cymbal Hi-Hat



Purple Kit: (left to right) Ride Cymbal Floor Toms 2 and 1 Tom 2 and 1 Kick Drum (aka Bass Drum) Snare (behind and below Tom 1) Crash Cymbal Hi-Hat



Master Drum Key

MIDI Drum Map

MIDI Drums are mapped to keys on a MIDI keyboard.

B2	35	Acoustic Bass Drum	C5	60	Hi Bongo
C3	36	Bass Drum	C#5	61	Low Bongo
C#3	37	Side Stick	D5	62	Mute Hi Conga
D3	38	Acoustic Snare	D#5	63	Open Hi Conga
D#3	39	Hand Clap	E5	64	Low Conga
E3	40	Electric Snare	F5	65	High Timbale
F3	41	Low Floor Tom	F#5	66	Low Timbale
F#3	42	Closed Hi Hat	G5	67	High Agogo
G3	43	High Floor Tom	G#5	68	Low Agogo
G#3	44	Pedal Hi Hat	A5	69	Cabasa
A3	45	Low Tom	A#5	70	Maracas
A#3	46	Open hi Hat	B5	71	Short Whistle
B3	47	Low Mid Tom	C6	72	Long Whistle
C4	48	Hi Mid Tom	C#6	73	Short Guiro
C#4	49	Crash Cymbal 1	D6	74	Long Guiro
D4	50	High Tom	D#6	75	Claves
D#4	51	Ride Cymbal 1	E6	76	Hi Wood Block
E4	52	Chinese Cymbal	F6	77	Low Wood Block
F4	53	Ride Bell	F#6	78	Mute Cuica
F#4	54	Tambourine	G6	79	Open Cuica
G4	55	Splash Cymbal	G#6	80	Mute Triangle
G#4	56	Cowbell	A 6	81	Open Triangle
A4	57	Crash Cymbal 2			
A#4	58	Vibra slap			

B4 59 Ride Cymbal 2



Common Rhythms Notated

Basic Rock Beat

A really basic rock beat: Bass hits on beats 1 and 3, while the snare hits on 2 and 4. The hi-hat hits on every 8th note. Variations of this usually involve positions of the hi-hat being open or closed.



This is the same beat as above, but the hi-hat is open on the last 8th note beat



The following beat is the same as the previous beat except for the bass drum rhythm. In this pattern, the bass hits on the "one" of the 1st beat and the "and" of the 2nd beat, then the "one" of the 3rd beat and the "and" of the 4th beat.



The following beat is similar as the last drum rhythm except for the bass drum rhythm. In this pattern, the bass hits on the "one" and the "and" of the 1st beat and the "one" and "and" of the third beat.



Similar to the last rhythm, but the first beat only hits on the "one" and not the "and" too.



This is the same as the first rock pattern, except the hi-hat is in sixteenth notes.



Ringo

Saying that Ringo is a great drummer is an understatement. He's not known for showing a lot of flash, but he plays the right beat for the song.

Some of the drum rhythm from All My Loving



Some of the drum rhythm from Another Girl



Some of the drum rhythm from Back In The USSR (Sometimes referred to as The Jungle Beat)



Some of the drum rhythm from Come Together



Some of the drum rhythm from Don't Let Me Down



Some of the drum rhythm from Eight Days A Week (Tom toms are handclaps)



Some of the drum rhythm from Get Back



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Some of the drum rhythm from Here Comes The Sun





Some of the drum rhythm from It Won't Be Long



Some of the drum rhythm from Michelle



The following is played on Congas and Clave and is from the song And I Love Her



Motown Beats

The following is part of the drum rhythm from the song Money



Motown Turn Around / Fills

Benny Benjamin

Benny Benjamin and Urial Jones Turn Around



Richard "Pistol" Allen Turn Around



Latin Rhythms

Bossa Nova





Other Percussion

There are other percussion instruments that are present in many popular recordings that, while generally in the background, have a profound effect on the groove of a song. A couple of the more popular rhythm instruments are tambourines and shakers.

Tambourine

Tambourines, while perhaps not as popular as they were in the 60s and 70s, can really change the way a rhythm track sounds and can greatly enhance the groove. Listen to just about any Motown track from the 60s and 70s and you'll here a tambourine in the mix.

Shaker

A shaker is another unsung hero of many great rhythm tracks. It can often be so subtle that it's hard to pick it out, but if you took it away, it would leave the rhythm track lacking. Used a lot in Latin music.

Reggae

Reggae is played in 4/4 time because the symmetrical rhythmic pattern does not lend itself to other time signatures such as 3/4. One of the most easily recognizable elements is offbeat rhythms; staccato chords played by a guitar or piano (or both) on the offbeats of the measure, often referred to as the **skank**.

This rhythmic pattern accents the **second** and **fourth** beats in each bar and combines with the **drum's emphasis on beat three** to create a unique sense of phrasing. The reggae offbeat can be counted so that it falls between each count as an "and" (example: 1 and 2 and 3 and 4 and, etc.) or counted as a halftime feel at twice the tempo so it falls on beats 2 and 4. This is in contrast to the way most other popular genres focus on beat one, the "downbeat".

The tempo of reggae is usually slower than both ska and rocksteady. It is this slower tempo, the guitar/piano offbeats, the emphasis on the third beat, and the use of **syncopated**, **melodic bass lines** that differentiate reggae from other music, although other musical styles have incorporated some of these innovations. Reggae tempo is a swing tempo.

Harmonically the music is essentially the same as any other modern popular genre with a tendency to make use of simple chord progressions. Reggae sometimes uses the **dominant chord in its minor form** therefore never allowing a perfect cadence to be sounded; this lack of resolution between the tonic and the dominant imparts a sense of movement "without rest" and harmonic ambiguity. Extended chords like the major seventh chord ("Waiting in Vain" by Bob Marley) and minor seventh chord are used though suspended chords or diminished chords are rare. Minor keys are commonly used especially with the minor chord forms of the subdominant and dominant chord (for example in the key of G minor the

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progression may be played $\mathbf{Gm} - \mathbf{Dm} - \mathbf{Gm} - \mathbf{Dm} - \mathbf{Cm} - \mathbf{Dm} - \mathbf{Cm} - \mathbf{Dm}$). A simple progression borrowed from rhythm and blues and soul music is the tonic chord followed by the minor supertonic chord with the two chords repeated continuously to form a complete verse ("Just My Imagination" by The Temptations C - Dm7).

The concept of "**call and response**" can be found throughout reggae music, in the vocals but also in the way parts are composed and arranged for each instrument. The emphasis on the "**third beat**" of the bar also results in a different sense of musical phrasing, with bass lines and melody lines often emphasizing what might be considered "pick up notes" in other genres.

Reggae Drums and other percussion

A standard drum kit is generally used in reggae, but the snare drum is often tuned very high to give it a timbales-type sound. Some reggae drummers use an additional timbale or high-tuned snare to get this sound. Cross-stick technique on the snare drum is commonly used, and tom-tom drums are often incorporated into the drumbeat itself.

Reggae drumbeats fall into three main categories: **One Drop**, **Rockers**, and **Steppers**. With the One drop, the emphasis is entirely on the backbeat (usually on the snare, or as a rim shot combined with bass drum). Beat one is empty except for a closed high hat commonly used, which is unusual in popular music. An example played by Barrett can be heard in the Bob Marley and the Wailers song "One Drop". Barrett often used an unusual triplet cross-rhythm on the hi-hat, which can be heard on many recordings by Bob Marley and the Wailers, such as "Running Away" on the Kaya album.

An emphasis on the backbeat is found in all reggae drumbeats, but with the **Rockers** beat, the emphasis is on all four beats of the bar (usually on bass drum). In **Steppers**, the bass drum plays every quarter beat of the bar, giving the beat an insistent drive. An example is "Exodus" by Bob Marley and the Wailers. Another common name for the Steppers beat is the "four on the floor". The Steppers beat was adopted (at a much higher tempo) by some two-tone ska revival bands of the late 1970s and early 1980s.

An unusual characteristic of reggae drumming is that the drum fills often do not end with a climactic cymbal. A wide range of other percussion instrumentation are used in reggae. Bongos are often used to play free, improvised patterns, with heavy use of African-style cross-rhythms. Cowbells, claves and shakers tend to have more defined roles and a set pattern.

Reggae drummers often involved these three tips for other reggae performers: (1) go for open, ringing tones when playing ska and rocksteady, (2) use any available material to stuff the bass drum so that it

tightens up the kick to a deep, punchy thud, and (3) go without a ride cymbal, focusing on the hi-hat for timekeeping and thin crashes with fast decay for accents.

One Drop

One drop rhythm is a reggae style drum beat. Popularized by Carlton Barrett, long-time drummer of Bob Marley and the Wailers, the creator is disputed, and it has been attributed to drummers including Barrett, Carlton and his brother Aston, and Winston Grennan.

Characteristics

The backbeat is characterized by the dominant snare drum stroke (usually a click produced by crosssticking) and bass drum both sounding on the third beat of every four, while beat one is left empty. Thus, the expected hit on beat one is "dropped," creating the one-drop effect. Dropping out the bass on the "one" of the measure further accentuates the downbeat of the drums creating the rhythm.

This may be seen in the drum notation for the typical rock drum pattern (note the bass beat on 1):

And the one drop (note the lack of a bass beat on 1, hence the name one-drop):

HH | x-x-x-x-x-x-x-x-| | S | ----o----o----| | B | o-----o-------| | 1 + 2 + 3 + 4 +



Variations:

Rockers

The rockers rhythm is essentially the one drop with a steady bass drum on every eighth note, though one drop is slower than a ska pattern, and rockers is often slower than one drop.

Steppers

The steppers rhythm is essentially the one drop with a steady bass drum on every quarter note.



One Drop (Sixteenths)



Half-Time Variant

This variant works well. Note the emphasis on the 3rd beat. Note that the swing in the hi-hat is notated. Reggae beats are invariably swing beats.

Reggae Ensemble

Here is an example of a piece of music using a one-drop rhythm on the drums with the organ playing the skank (aka stab chords) and a bass line underneath.



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An example of reggae drums and bass:



An example of reggae drums and bass and keyboard:

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Reggae Bass

The bass guitar often plays the dominant role in reggae, and the drum and bass is often the most important part of what is called, in Jamaican music, a **riddim** (rhythm), a (usually simple) piece of music that is used repeatedly by different artists to write and record songs with. Hundreds of reggae singers have released different songs recorded over the same rhythm. The central role of the bass can be particularly heard in dub music – which gives an even bigger role to the drum and bass line, reducing the vocals and other instruments to peripheral roles.

Reggae Bass

Sample Reggae Bass Line:



Another example of a Reggae Bass Line



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In this typical reggae bass line, the roots of the chords are emphasized, with musical interest created by going from the root down to the fifth of the chord. A dotted quarter note and eighth note rhythm is used repeatedly. The bass sound in reggae is thick and heavy, and equalized so the upper frequencies are removed and the lower frequencies emphasized. The bass line is often a repeated two or four bar riff when simple chord progressions are used. The simplest example of this might be Robbie Shakespeare's bass line for the Black Uhuru hit "Shine Eye Gal". In the case of more complex harmonic structures, such as John Holt's version of "Stranger in Love", these simpler patterns are altered to follow the chord progression either by directly moving the pattern around or by changing some of the interior notes in the phrase to better support the chords.

Reggae Guitars

The guitar in reggae usually plays on the off beat of the rhythm. So if one is counting in 4/4 time and counting "1 and 2 and 3 and 4 and ...", one would play a downstroke on the "and" part of the beat. A musical figure known as **skank** or **'bang**" or "**stab chords**" has a very dampened, short and scratchy chop sound, almost like a percussion instrument. Sometimes a double chop is used when the guitar still plays the off beats, but also plays the following eighth-note beats on the up-stroke.

Reggae Keyboards

From the earliest days of Ska recordings, a piano was used to double the rhythm guitar's skank, playing the chords in a staccato style to add body, and playing occasional extra beats, runs and riffs. The piano part was widely taken over by synthesizers during the 1980s, although synthesizers have been used in a peripheral role since the 1970s to play incidental melodies and countermelodies. Larger bands may include either an additional keyboardist, to cover or replace horn and melody lines, or the main keyboardist filling these roles on two or more keyboards.

The reggae organ-shuffle is unique to reggae. In the original version of reggae, the drummer played a reggae groove that was used in the four bar introduction, allowing the piano to serve as a percussion instrument. Typically, a Hammond organ-style sound is used to play chords with a choppy feel. This is known as the **bubble**. This may be the most difficult reggae keyboard rhythm. The **organ bubble** can be broken down into 2 basic patterns.

Pattern 1: In the first, the 8th beats are played with a space-left-right-left-space-left-right-left pattern, where the spaces represent downbeats not played—that and the left-right-left falls on the ee-and-a, or and-2-and if counted at double time.

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Pattern 2: In the second basic pattern, the left hand plays a double chop as described in the guitar section while the right hand plays longer notes on beat 2 (or beat 3 if counted at double time) or a syncopated pattern between the double chops.

Both these patterns can be expanded on and improvised embellishments are sometimes used.

Reggae Horns

Horn sections are frequently used in reggae, often playing introductions and countermelodies. Instruments included in a typical reggae horn section include saxophone, trumpet or trombone. In more recent times, real horns are sometimes replaced in reggae by synthesizers or recorded samples. The horn section is often arranged around the first horn, playing a simple melody or counter melody. The first horn is usually accompanied by the second horn playing the same melodic phrase in unison, one octave higher. The third horn usually plays the melody an octave and a fifth higher than the first horn. The horns are generally played fairly softly, usually resulting in a soothing sound. However, sometimes punchier, louder phrases are played for a more up-tempo and aggressive sound.

Bass Guitar

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The rhythm section of a rock band is generally the drum and bass guitar. The simplest thing to play would be playing the root note of each chord change that strikes at the same tempo as the kick drum in the drum beat. So if the chord of the measure is C and the kick drum hits on beat 1 and beat 3, then the bass guitar would play a C note on those same beats. This will sound good, but not great. In order to make the music more interesting, the bass player will need to create a more interesting bass line.

Pop Music

Any style that isn't Rhythm and Blues, Soft or Hard Rock, Latin, Jazz, etc... It usually has a light feeling with easy bass patterns whether it be shuffle or swing or straight 8th rhythm.



Rhythm and Blues - Soul Music

The bass has an important integral part in establishing the "feel" of R&B.





The Boogaloo

This is usually slow in tempo with a lot of bass notes to fill out the pattern. Once you get the feel of it, you can be highly creative.

Originating in New Orleans and/or probably Jamaica, it has a "double-time Samba" feel to it. The bass can play any rhythm pattern that usually is played on Latin Timbales.

The drummer always plays straight time which feels like half-time to what the bass player is playing.



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Motown Style

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Many if not most of the bass played on Motown hits were played by the great James Jamerson and a handful of other guys. Motown had it's own unaccredited rhythm section. The same guys would play all of the music on all the early Motown hits. These session musicians were known collectively as "The Funk Brothers". The Funk Brothers were a group of Detroit-based session musicians who performed the backing to most Motown recordings from 1959 until the company moved to Los Angeles in 1972. They were all jazz players that Berry Gordy recruited to be session players for Motown Records. The other bass players in The Funk Brothers besides James Jamerson were Clarence Isabell, Bob Babbitt, Edward Pickens, Tweed Beard, Joe Williams, Michael Henderson, Joe James





Bo Diddley Style

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BASS

Gospel Style

This is really the mother of all Soul. Derived from old Spiritual songs and still played in all of the "soulful churches". Ray Charles was one of the first to use gospel style in his music, often criticized for doing so.





Memphis and/or Nashville Style

Originally very bluesy but simple, this is really a shuffle feel with heavy accents on every beat and an occasional offbeat push before the downbeat.





BASS

Latin

This is usually a fast Bossa-Nova, Samba, Cha-Cha, Mambo, etc... The unusual beauty of up-tempo music is enhanced by the bass playing on beats 3 and 4. That takes getting used to, but really swings.



Country



Arranging and Orchestrating

Modern symphony orchestra is usually divided into four sections or choirs. Here is a partial list of the different instruments in these groups:

Strings	Woodwinds	Brass	Percussion
Violin	Piccolo	French Horn	Xylophone
Viola	Flute	Trumpet	Marimba
Cello	Oboe	Trombone	Vibraphone
Double Bass	Bassoon	Tuba	Glockenspiel
	Clarinet		Chimes
	English Horn		Cymbals
	Saxophone		Drums

Why Learn Orchestration?

Even though you may not ever write for a symphony, chamber music, etc... It's not a bad subject to learn should you want to write some orchestration in a pop song. There are numerous examples where producers enhanced a pop song by adding orchestral arrangements to them.

George Martin, the producer for the Beatles, wrote a lot of the orchestral arrangements that you can hear in Beatles' songs. Listen to Eleanor Rigby or Yesterday to hear the string arrangements George Martin wrote; or the horns in All You Need Is Love or Penny Lane. It just adds another aesthetic to the song that makes them better than they would be without the additions.

Orchestration Terms

A symphony orchestra has a lot of instruments that fall into different pitch ranges. Since most Western music is based upon triad harmony, meaning three part harmony based upon a three note triad chord, many instruments may either be playing the same note or the same note in another octave. Because of this fact, composers have a set of terms to describe how the notes of the triad are arranged.

Unison	When two or more instruments are playing the same note, in the same register.
Octave	When two or more instruments are playing the same note, but in different octaves.
Tutti	When the entire orchestra, or a number of sections are all playing at the same time.

Ordering of Instruments and Sections in an Orchestral Score

As a general rule, the instruments in each section are listed in the score from highest to lowest in pitch, top to bottom. Notice the different placement of percussion in orchestra and band scores.

Orchestral Score Order	Band Score Order	Brass Quintet
Woodwinds	Flutes (Fl or Fls)	Trumpet I
Flutes (Fl or Fls)	Oboes (Ob or Obs)	Trumpet II
Oboes (Ob or Obs)	Bassoons (Bsn or Bsns)	Horn
English Horn	Clarinets (Cl or Cls)	Trombone
Clarinets (Cl or Cls)	Saxophones (AS, or TS, or BS)	Tuba
Bassoons (Bsn or Bsns)	Cornets (Cor)	
Brass	Trumpets (Tpt or Tpts)	Woodwind Quintet
Horns (Hn or Hns)	Horns (Hn or Hns)	Flute
Trumpets (Tpt or Tpts)	Trombones (Trb or Trbs)	Oboe
Trombones (Trb or Trbs)	Euphoniums (Euph)	Clarinet
Tuba (Tuba)	Tubas (Tubas)	Horn
Timpani (Timp)	Timpani (Timp)	Bassoon
Percussion (Perc)	Percussion (Perc)	
Other Instruments		
Strings		
Violins I (VIns)		
Violins II		
Viola (Vla)		
Violoncellos (Vcl)		

Transposing Instrument

Double Bass (DB)

A transposing instrument is an instrument for which music notation is not written at concert pitch. For example, playing a written middle C on a transposing instrument produces a pitch other than middle C. Playing a written C on clarinet or soprano saxophone produces a concert Bb, so these are referred to as Bb instruments. Providing transposed music for these instruments is a convention of musical notation. The instruments do not transpose the music; rather, their music is written at a transposed pitch. Where chords are indicated for improvisation they are also written in the appropriate transposed form.

For some instruments, a written C sounds as a C, but is in a different octave; these instruments are said to transpose "at the octave". Pitches on the piccolo sound an octave higher than written while those on the double bass sound an octave lower.

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String Choir

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The string section consists of basically four instruments, the violin, viola, cello and double bass. Each of these instruments plays a specific role. They are basically separated by the frequency register each has the ability to play within the Soprano, Alto, Tenor, Bass spectrum. Violins are the soprano instruments, violas are the alto instruments, cellos are the tenor or bass instrument and double bass is the bass instrument. The reason that the cello also can fall into being a bass instrument is because it has the ability to play in that register. If you look at a piece of music written for piano, it is often written with three or four part harmony. While it is perfectly feasible to take each voice of this harmony and apply it to the appropriate string instrument, it doesn't always result in the most interesting sound. In order for it to sound interesting, there needs to be movement throughout the piece to be pleasing to the ear. Each of these instruments do not just represent the voice in the SATB spectrum, but they also play a rhythmic role as well. The variation in articulations of each instrument should be considered when scoring.

The Standard String Quartet	The Standard String Quintet
Violin 1	Violin 1
Violin 2	Violin 2
Viola	Viola
Cello	Cello
	Double Bass

The experimentation by Haydn, Mozart, and Beethoven with string quartets had far reaching effects on the successful establishment of a five-part string choir, the forebear of the virtuosic string ensemble we find in today's orchestra.

Individuality Within The Ensemble

- The emancipation of the second violin, viola, cello so that they became equal partners with the first violin.
- The use of voice crossings for special effects.
- The use of particular registers on all instruments for coloristic as well as structural purposes.
- The extension of the range on all instruments.

The Double Bass

In the music of Haydn, Mozart, Beethoven and Schubert, it was usual for the bass to double the cello in most passages, especially in tutti sections. In passages where a lighter string texture was desired, the double bass was eliminated. Independent double bass parts became increasingly popular during the 19th century, as the cello took on the role of tenor voice of the strings.

Foreground, Middleground and Background

Foreground

The most important voice, usually the melody which the composer wants to be heard most prominently. The composer must consider each of the elements, particularly the foreground line, with regard to its tonal compass and the desired emotional intensity. If the principal idea is to be scored for strings, the ranges and registers characteristic of each of its five instruments must be considered. After these decisions have been made, the scoring of the main theme, idea, or gesture will then provide clues for the scoring of the middleground and background material.

- Using the first violin to present the melody
- Using the second violin to present the melody

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 - Using the viola to present the melody
 - Using the cello to present the melody
 - Using the double bass to present the melody

Middleground

Counter melodies or important contrapuntal material. This is where counterpoint comes into play.

Background

Accompaniment, either chordal or using polyphonic or melodic figures. Many composers recommend staying away fro the register of the melody line. In many instances, especially when the foreground and background are played by instruments of similar color, this is good advice.

Using Textural and Timbral Changes to Differentiate Between Melodic Statements

Sometimes a forceful unison or octave statement of a theme is used in presenting the antecedent of an idea, followed by a change of texture in the consequent that emphasizes its different emotional quality.

Coupling

Coupling is when two instruments play a passage at parallel intervals, such as parallel 3rds or parallel 5ths.

Unisons and Octaves

Using string unisons or octave doublings to create a more powerful melodic statement.

Contrapuntal Writing For Strings

Two or more melodies superimposed on one another result in a contrapuntal texture. But in orchestral music there is a gray area between foreground melodic material, middleground melodic material, and background melodic material, a factor that can present problems for the orchestrator or composer. The difficulties are twofold: First, one must sort out which melodies belong to which of the three categories so that each melody clearly communicates to the listener whether it is primary, secondary, or tertiary material. Second, rather than becoming overwhelmed by the vast array of choices of orchestral color, one must limit one's choices, particularly if the passage is to be repeated and a different choice is used for the repetition.

Beethoven, Symphony No. 7

Beethoven has the first violins play the very simple tune, the seconds play the counter theme, and the violas, cellos, and double basses supply the background harmony. Even though the voices are close together in register and homogeneous in sound, the passage works successfully for two reasons:

- 1. Each of the three parts has its own characteristic rhythm and special articulation.
- 2. The foreground and middleground themes were introduced earlier without the background (the first theme was played all by itself at the beginning of the movement) and were more clearly heard at the time.

The manner in which these factors add clarity to this passage may help suggest ways of solving the sometimes complex problems that involve distinguishing between foreground, middleground, and background material.

Polyphonic Writing

Polyphonic writing for strings has been popular since the late Renaissance and early Baroque, when English as well as Italian masters, and later Bach and Handel, firmly established this type of instrumental style. Since all five voices of the string choir are capable of performing equally elaborate gestures, all contrapuntal textures can be successfully written for the string section. Many times the exposition of a fugue or fugato subject is assigned to the strings before it is developed, altered or doubled by other members of the orchestra, a compositional method that has proven to be most effective.

When contrapuntal passages are to be scored by strings alone, two major points to consider are clarity and balance. These must be achieved by:

- 1. Placing the most important melody in the best possible register of an instrument.
- 2. Thinning the counterpoint to let the main theme break through.
- 3. Registrally separating theme and counter theme (one high, one low, or vice versa).
- 4. Making the counter theme sufficiently different rhythmically from the primary theme that they don't interfere with one another when the two are stated together.

Homophonic Writing For Strings

One of the orchestrator's most important tasks is the distribution of pitches in a predominantly homophonic passage. Spacing, register, and melodic considerations are the major factors in determining exactly who should play which pitches, especially in string writing, where the overall coloring is so homogeneous.

Chordal Spacing and Pitch Doubling

We will examine chordal spacing and pitch doubling in terms of how these might correspond to the overtone series. First we need to define what the overtone series is.

Overtone Series

An overtone is any partial above the lowest partial. A partial is any of the sine waves or simple tones of which a complex tone is composed, not necessarily with an integer multiple of the lowest harmonic. A harmonic is any member of the harmonic series, an ideal set of frequencies that are positive integer multiples of a common fundamental frequency. The fundamental is obviously a harmonic because it is one times itself. A harmonic partial is any real partial component of a complex tone that matches (or nearly matches) an ideal harmonic. The term overtone does not imply harmonicity or inharmonicity and has no other special meaning other than to exclude the fundamental. It is mostly the relative strength of the different overtones that give an instrument its particular timbre, tone color, or character. When writing or speaking of overtones and partials numerically, care must be taken to designate each correctly to avoid any confusion of one for the other, so the second overtone may not be the third partial, because it is the second sound in a series.

Some electronic instruments, such as synthesizers, can play a pure frequency with no overtones (a sine wave). Synthesizers can also combine pure frequencies into more complex tones, such as to simulate other instruments. Certain flutes and ocarinas are very nearly without overtones.

Overtone Series on E:

E2, E3, B3, E4, G#4, B4, D5, E5, F#5, G#5, A#5, B5, C#6, D6, D#6, E6



Using the Overtone series To Space A Chord:

Analysis Of Previous Chord Spacing:

Chord Spacing 1		Chord Spacing 2		
E6	Violin 1	G#6	Violin 1	
G#5	Violin 1	B5	Violin 1	
E5	Violin 2	E5	Violin 2	
B4	Violin 2	G#4	Violin 2	
E4	Viola	E4	Viola	
G#3	Viola	B3	Viola	
B3	Cello	G#3	Cello	
E2	Cello	B3	Cello	
E1	Double Bass	E2	Double Bass	

Both chords can be played piano or forte. The first would sound a bit darker than the second because of the lower octave of the basses and the wider spacing at the top, but the difference is not great. All instruments are assigned a traditional place in the distribution. Notice the greater space is usually left between pitches of the lower instruments than between those of the upper instruments, just as there are greater distances between the more sonorous lower partials than between the upper partials of the overtone series.

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Spacing the chords more closely gives the composer more choices in the distribution of parts, because different instruments can play the same role. A progression using closely spaced chords may be scored in one of the following ways:

- Straightforward Scoring Violin I, soprano; violin II, alto; viola, tenor; cello, bass; double bass, doubling the cello an octave lower. This scoring would result in a rather nondescript setting if the dynamic were piano to mezzo forte, but would prove very bass heavy if the dynamic were loud, since the violas, cellos, and basses are in a much better register than the violins.
- 2. Violas divisi on the upper two parts, cellos divisi on the lower two. The result of this combination would be a very mellow, darkish sound.
- 3. Number 2, but adding the bass an octave lower, which would greatly darken the line.
- 4. Violin I, the soprano, violin II or violas divisi on alto and tenor. This would give a slightly lighter but still subdued color to the progression.
- 5. All cellos, with the basses doubling the bassline at pitch. This would of course, be very intense.
- 6. The entire progression transposed up one octave, then two octaves, without the double bass, this would be quite sparkling.

If there were a first inversion chord in the previous score, we would have an additional doubling problem, since it is not common practice to double the bass (the 3^{rd}) except when the chordal root is scale degree $\hat{1}$ (VI⁶), $\hat{2}$ (VII⁶), $\hat{4}$ (II⁶), $\hat{5}$ (III⁶). In the often used I⁶, IV⁶, and V⁶ chords, special attention should be given to spacing and doubling so that the bass is not doubled in a four voice texture; if there are more than four voices, the 3^{rd} of the chord (its bass) would invariably be doubled somewhere to strengthen it. In this case, it is advisable to double it near the bottom of the texture to bring out the "open" sound so characteristic of this inversion, as in the chords that are marked "good" in the following example. The chords designated "not good" show that the 3^{rd} of the chord is overdoubled, thereby weakening the first inversion effect of the chord.


Doubling in First Inversion Chords

Melody To Be Scored



How Can This Be Scored:

- 1. It can be played by the 1st violins without accompaniment.
- 2. It can be played by the 2nd violins and doubled by the 1st violins an octave higher.
- 3. It can be doubled at the unison by another instrument combination
 - a. violins 1 and 2.
 - b. violins and violas
 - c. violins and cellos
 - d. violas and cellos
- 4. It can be played sul G on the violin.
- 5. It can be played as a viola or a cello solo, since both instruments would be more intense in that register than the violins.
- 6. It could be played in unison by all of the violins.

Transcribing From Piano To Strings

There are a variety of ways to accomplish this task, but the most important consideration is realizing the composer's intent without introducing any distortion of it. Pay attention to not only the notes of a piece, but also the rhythm of the piece to be transcribed. Strings are great for expressing legato phrases, but they are also capable of using articulations to express more rhythmic passages. Listen to George Martin's scoring for Eleanor Rigby to see how he created a rhythm with the cellos.

The Piano Sustain Pedal

The piano sustain pedal must be taken into consideration when scoring a piano piece. The sustained notes from the piano score should be mimicked by the string score in some way.

Transcribing To Simulate Sustaining Pedal

Piano Version



Note in the following string interpretations of this piano piece how the piano pedal is mimicked using the two lower voices and legato in the higher voices.





String Version 2





String Version 3

Dovetailing

Dovetailing is a carpentry term that has been borrowed for orchestration. The interlocking pieces of wood are in the shape of a dove's tail, but the effect is a seamless joint that is very strong. A composer may score a passage where the shared note on the entrance of a second instrument makes it sound like the first instrument "morphs" into the second instrument.

Example of Dovetailing

Piano Piece:





String Interpretation of Piano Piece Using Dovetailing

Note how the viola starts its note before the violin ends its note. This is dovetailing.

How To Use Strings In A Standard Rock Band

A standard rock band, consists of a drummer on a standard rock drum kit, a bass player playing electric bass, a rhythm guitar player, a lead guitar player, a vocalist, and perhaps a keyboard player and maybe some backup singers. There are many ways to add strings to accompany a song.

- They can be used as a pad instrument to create the chordal glue that sits in the background of the mix.
- They can be used during certain passages to embellish a theme.
- They can be used during certain passages to enhance the intensity of the section.
- They can be used to create a rhythmic pulse, like how the cellos in Eleanor Rigby do.
- They can be used contrapuntally to create counterpoint to the primary melody.

Woodwinds

A woodwind choir, also called woodwind orchestra, or woodwind ensemble is a performing ensemble consisting exclusively of members of the woodwind family of instruments. It typically includes flutes, oboes, clarinets, bassoons and saxophones, all of varying sizes. Woodwinds are used a lot in jazz ensembles, especially clarinets, saxophones and occasionally flute (Ron Burgundy).

ORCHESTRATION

woodwind Articulations	
Legato	Woodwind instruments generally have the ability to play very smooth and soulful legato passages. Much as the string instrument is limited in playing long legato passages by the length of a bow stroke, a woodwind player is limited by the amount of air that can be expelled in one breath.
Vibrato	The tone of the woodwinds, much like that of strings, is enriched by the use of vibrato.
Staccato	Woodwinds are capable of staccato phrasing. Staccato is performed on a woodwind by short breaths.
Soft Tonguing	In some instances, slurs are placed over repeated notes that have dots or dashes, calling for soft tonguing. With dots over the notes under the slur, the articulation is slightly "harder" than when dashes separate the notes. The effect is similar to slurred staccato and loure on strings, played on one bow. Such slurred notes are played in one breath.
Double and Triple Tonguing	In very fast passages, the player will double-tongue or, especially in fast triplet passages, triple-tongue.
Dynamic Envelopes	A dynamic envelope is when the player creates a strong attack, then immediately decreasing volume, and, in some cases increasing again. For example $sf > p < sf$
Flutter Tongue	This effect is not unlike the unmeasured tremolo for strings in notation and purpose.
Glissandi	Glissandi are most successful on the clarinet and saxophone, but only in an upward direction.
Slap Tonguing	Slap tonguing, is a special effect used in jazz. It produces a perky, snappy, overarticulated attack. It is especially effective on a single-reed instruments.

Woodwind Articulations

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Instrument Ranges





The Role Of Woodwinds In The Symphony Orchestra

The string choir is fairly homogeneous in sound and plays almost continuously throughout most orchestral compositions. In contrast the woodwind choir's sound is heterogeneous and is usually reserved for specific functions. The woodwinds most common functions have been:

- 1. To play solo passages, either entire melodies, melodic fragments, or smaller melodic gestures.
- 2. To provide harmonic background for a string foreground.
- 3. To providing a contrasting color, repeating or echoing a passage previously played by the strings or playing part of a passage that is divided between strings and winds.
- 4. To double other instruments of the orchestra.

The wind instruments, being more heterogeneous, all sound more unique than the string choir. Because of this, it's not as easy to choose which instrument is a better choice because its timbre can be so different from another.

Melody

Wind instruments can be used as melody instruments as well as harmony. There are combinations of woodwinds that many composers will refrain from using because the timbre of one may overshadow the other. For example many will note pairing the Oboe with the Clarinet is not a good match because of the following reasons:

- 1. The oboe, with its nasal quality, will overshadow the clarinet.
- 2. The conductor will have to balance this conflict by instructing the oboe player to play softer.
- 3. The clarinet and oboe may have difficulty staying in tune with each other.

These are merely guidelines and are sometimes ignored. In Schubert's Symphony No. 8, First Movement, he does just this.

The following are some choices that could have been made instead of the oboe, clarinet pairing.

A flute and oboe pairing:

The oboe, in a more advantageous register, will stand out, but the flute will neutralize the nasal quality of the oboe and give the passage a rounder, richer sound.

A flute and clarinet pairing:

If we combine flute with clarinet, we eliminate the bite of the oboe sound, but the clarinet stands out almost exclusively. The flute is in a no-brilliant register, contributing little more than a thickening of the resulting tone.

A bassoon as the pairing instrument:

The bassoon, which cannot play this in the same register as the flute, oboe, or clarinet, could instead be doubled with any one of these instruments at the octave. Any of these pairings would be quite sonorous.

Accompaniment

The woodwinds can be used as accompaniment by themselves or in combination with the string choir. They provide a palate of different timbres that allow the orchestrator to provide different coloring to passages and parts of a passage.

The Variety of Orchestral Treatments

Melodic Treatments

- Unison Doubling
- Octave Doubling

Choosing A Color To Characterize Or Clarify A Melodic Gesture Or Passage

Frequently, particularly in tone poems, a particular instrumental color (or the color of a small group of instruments) is used melodically to represent a person or an object. Think of the idea of a musical conversation between two instruments, where the timbre, as well as the melody played, distinguish between the roles. The heterogeneous nature of the woodwind choir, make it a musical timbral palette which is much more varied than the other choirs in the orchestra. Assigning a motive or melody to a particular instrument or group of instruments is an effective way to clarify the form of a piece. Between the instruments available in the woodwind section: Flutes, Oboes, English Horns, Clarinets, Bassoons and Saxophones; the clarinet in the 19th century was considered the nightingale of the orchestra.

Harmonic Treatment

Pedal Accompaniment

In many forte tutti passages within the Classical and Romantic repertoire, the winds (with horns) serve to strengthen the harmony by providing one or more pedals to give strong, continuous, and solid underpinning to the music.

Sustained Accompaniment

Large scale sustained harmonies played by the woodwinds are a common device of the Classical and Romantic period orchestrations.

Homophonic Writing For Woodwinds

The wind choir with or without horns was not widely used in homophonic passages until the 19th century. But from that point on, there are many examples of homophonic writing, as brief as four measures to as long as entire passages.

Chord For Wind In Pairs

Chords for winds in pairs may be voiced in four ways:



- Stacking one woodwind pair over the other is probably the most frequently used voicing, but you
 must be sure that the most prominent melody note is in a good register for the instrument to
 which it has been assigned.
- Interlocking the instrumental parts is a more imaginative voicing because it mixes the wind colors, but it must be used carefully because the pitches in some registers on some instruments will predominate over those on other instruments that lack a similar carrying power.



3. Enclosing one instrumental group within another may present similar problems to those that result from interlocking instrumental groups, namely, upsetting the timbral balance.



The third combination in the above illustration encloses the oboe within two different instrumental timbres. This not only gives better balance, since the clarinet is stronger on D5 than the second flute, but also adds color.

4. Overlapping instrumental parts (doubling instruments at the unison) was in much greater use before the 20th century than it is today; as we have noted, this technique can obscure the timbral characteristics of both sets of instruments and often results in strengthening a pitch that does not necessarily need that kind of emphasis. In orchestral tutti sections, of course, this practice is still common.

Chord For Multiples Of Woodwinds

When multiples of three or four instruments are used, the same principals of stacking, interlocking, enclosing, and overlapping should be followed. Assign pitches that are registrally and technically practical for each instrument so that the balance of the chord or the flow of the melody is not upset.

Chords In Which Each Note Has A Different Timbre

In most cases it is best to avoid using chords in which each note has a different timbre. Such chords are difficult to balance, and often played out of tune. However they can work when scored for single winds in a small orchestra, particularly if the chord is widely spaced, allowing each instrument to be placed in its most advantageous register. In the following example, notice that the preferred spacing has the largest intervals between the bass and the next highest voice. It is customary to voice the higher woodwinds (the upper notes of the chord) in close position.

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Spacing

Composers often treat the spacing of chord tones in a very personal way. The way that Beethoven vs Stravinsky vs Berlioz vs Schumann, etc... can be very different.

Contrapuntal Writing For Woodwinds

Since the wind section was not predominant in orchestral pieces of the Baroque and Classical periods, not many examples of fugal or imitative composition written specifically for winds can be found in those eras. In later periods contrapuntal passages written specifically for winds are a feature of many large orchestras.

Since each of the woodwinds has such a distinctive color timbre wise, contrapuntal writing, particularly when coupled with strong rhythms, can be very effective.

Using The Woodwinds For Contrast

One obvious use of the wind section is to provide color that contrasts with the string section. This can be done in a number of ways. For instance, one section of the orchestra can alternate with another section. Another technique is to have one section dovetail or merge with another in a passage.

Using The Woodwinds To Double Other Instruments

The woodwind choir is often called on to double the string choir, especially in tutti sections. In the 18th and 19th centuries, unison doublings of strings by winds were very popular. Today octave doublings are used more frequently. Many composers felt that unison doublings detract from the clarity of a line by thickening the sound and muddying the upper partials of both instruments.

Brass

The brass section of an orchestra has great dynamic power. This is true in pop songs as well. There are many bands and recordings that include brass instruments beyond just a symphony orchestra. Bands like Chicago, The Doobie Brothers, James Brown, Earth Wind and Fire, Genesis, The Commodores, The Ohio Players, Kool & The Gang and many more, have used brass instruments to great effect.

Brass Instrument Categories

Brass instruments are often subdivided into two subcategories.

- Horns
- Trumpets, Trombones, Tubas

They can also be subdivided in terms of transposition:

- Transposing Horns, Trumpets, and Cornets
- Non-Transposing Trombones, Tubas, and Euphoniums

Brass Instruments And The Written Orchestral Score

The arrangement of the brass choir on the orchestral page are placed right below the woodwinds in the following order:

- 4 Horns
- 3 Trumpets
- 3 Trombones
- 1 Tuba

Overblowing And The Principal Of The Harmonic Series

Up to the mid 19th century, trumpets and horns were not equipped with valves or pistons to play a variety of pitches, as they are today. Instead the performer executed different pitches on these instruments by overblowing the fundamental tone of that instrument, which produced the upper partials of the fundamental's overtone series. Each natural brass instrument consisted of a hollow tube governed by a single fundamental pitch; the longer the tube, the lower the fundamental pitch of that brass instrument. Without getting into the science of it, the overblowing of every fundamental pitch creates a harmonic series. For example, the harmonic series for the pitch of C2 is as follows:

Harmonic Series For C

C2, C3, G3, C4, E4, G4, Bb4, C5, D5, E5, F#5, G5, A5, Bb5, B5, C6, C#6, D6, Eb6, E6, F6

The Invention of Crooks, Valves And Slides

If you look at a modern trumpet, you'll notice that the tube bends into coil-like loops and that it has a series of pistons controlled by button-like levers. As stated before, the length of the tube is what changes the fundamental pitch of the horn. It doesn't have to be straight. A modern trumpet can lengthen or shorten the length of the tube by changing which tubes the players breath is directed. Modifying it in this manner, greatly increased the number of notes that the horn is able to play. Yet it is still limited from being able to play every chromatic note. This is why trumpets come with different fundamental tones such as C, D, Bb, Eb, etc... With a slide Trombone, the slide lengthens the tube length. A trombone is much more versatile at playing various notes and it is known as a non-transposing instrument as a result. Note that overblowing is still relevant with all brass instruments. They are all governed by the harmonic series of the fundamental tone.

Articulation

Just like string instruments and woodwinds, brass instruments have a variety of articulations that can change the way the instrument sounds.

Tone Production, Articulation And Tonguing

Just as woodwind players use their reed as a source of vibration, brass players use their lips. In both sets of instruments the vibrating column of air is then amplified and channeled through the instrument. Generally players keep their lips loose for low tones and tight for high tones. Tonguing on brass instruments is similar to tonguing on woodwinds. Like woodwind players, brass players can articulate with single, double or triple tonguing. A great variety of attacks are possible on all brass instruments, although the particular constraints of each brass instrument make certain attacks and articulations problematic, especially on extremely low notes that require a loose embouchure. The same can be said of extremely high notes with soft attacks where the lips must be very tight and the breath rather light to perform properly.

Breathing and Phrasing

Brass instruments require a great deal more breath than woodwinds do. Because playing these instruments can be rather taxing, the composer or orchestrator should allow frequent intervals to rest so that the players can catch their breath and their lips can recuperate.

Phrasing is very much like that for woodwinds. All slurred phrases are performed in one breath, tonguing only the first note. If a passage is not slurred in the score it will be tongued by the player, each note articulated separately.

Common Characteristics And Effects On All Brass Instruments

Attacks and Tonguing

Sforzando and the Forte-Piano Attack

Brass instruments can execute sforzando attacks better than winds or strings

Light, Soft And Single Tonguing

This effect can be accomplished so that is sounds very delicate and not brassy

Double Tonguing

The player articulates using the syllables ta-ka ta-ka ta-ka.

Triple Tonguing

The same as double tonguing, but with the syllables ta-ta-ka ta-ta-ka ta-ta-ka or ta-ka-ta ta-ka-ta.

Flutter Tonguing

Flutter tonguing is very effective and easy to produce on all brass instruments.

Glissandi

Horn and trumpet players can produce a glissando by using a lip slur. Lip slurs are most effective in the upper register, where partials are close together; they are also slightly easier to play by slurring up than down.

Vibrato

It is often regulated in contemporary repertoire through specific notation. Composers can call for everything from fast, slow or no vibrato to actual rhythmic patterns played with vibrato.

Trills And Tremolos

Most brass instruments can perform some tremolos successfully; all are able to play trills.

Mutes

All brass instruments can be muted.

Brass Instrument Ranges





Overtone / Harmonic Series

Overblowing horns beyond their fundamental tone produces pitches higher that follow the harmonic series. The following is a list of the harmonic series in each chromatic pitch from C2 to B2.

Harmonic Series For C C2, C3, G3, C4, E4, G4, Bb4, C5, D5, E5, F#5, G5, A5, Bb5, B5, C6, C#6, D6, Eb6, E6, F6 Harmonic Series For C# C#2, C#3, G#3, C#4, F4, G#4, B4, C#5, D#5, F5, G5, G#5, A#5, B5, C6, C#6, D6, D#6, E6, F6, F#6 Harmonic Series For D

D2, D3, A3, D4, F#4, A4, C5, D5, E5, F#5, G#5, A5, B5, C6, C#6, D6, D#6, E6, F6, F#6, G6 Harmonic Series For D# D#2, D#3, A#3, D#4, G4, A#4, C#5, D#5, F5, G5, A5, A#5, C6, C#6, D6, D#6, E6, F6, F#6, G6, G#6 Harmonic Series For E E2, E3, B3, E4, G#4, B4, D5, E5, F#5, G#5, A#5, B5, C#6, D6, D#6, E6, F6, F#6, G6, G#6, A6 Harmonic Series For F F2, F3, C4, F4, A4, C5, D#5, F5, G5, A5, B5, C6, D6, D#6, E6, F6, F#6, G6, G#6, A6, A#6 Harmonic Series For F# F#2, F#3, C#4, F#4, A#4, C#5, E5, F#5, G#5, A#5, C6, C#6, D#6, E6, F6, F#6, G6, G#6, A6, A#6, B6 Harmonic Series For G G2, G3, D4, G4, B4, D5, F5, G5, A5, B5, C#6, D6, E6, F6, F#6, G6, G#6, A6, A#6, B6, C7 Harmonic Series For G# G#2, G#3, D#4, G#4, C5, D#5, F#5, G#5, A#5, C6, D6, D#6, F6, F#6, G6, G#6, A6, A#6, B6, C7, C#7 Harmonic Series For C A2, A3, E4, A4, C#5, E5, G5, A5, B5, C#6, D#6, E6, F#6, G6, G#6, A6, A#6, B6, C7, C#7, D7 Harmonic Series For C

A#2, A#3, F4, A#4, D5, F5, G#5, A#5, C6, D6, E6, F6, G6, G#6, A6, A#6, B6, C7, C#7, D7, D#7 Harmonic Series For C

B2, B3, F#4, B4, D#5, F#5, A5, B5, C#6, D#6, F6, F#6, G#6, A6, A#6, B6, C7, C#7, D7, D#7, E7

Individual Brass Instruments

French Horn AKA Horn

The French horn (since the 1930s known simply as the horn in professional music circles) is a brass instrument made of tubing wrapped into a coil with a flared bell. The double horn in F/Bb (technically a variety of German horn) is the horn most often used by players in professional orchestras and bands, although the descant and triple horn have become increasingly popular.

Horn Transpositions

C Alto	Sounds as written	
Bb Alto	A major 2 nd lower than notated	2 semitones
A	A minor 3 rd lower than notated	3 semitones
Ab	A major 3 rd lower than notated	4 semitones
G	A perfect 4 th lower than notated	5 semitones
F	A perfect 5 th lower than notated	7 semitones
E	A minor 6 th lower than notated	8 semitones
Eb	A major 6 th lower than notated	9 semitones
D	A minor 7 th lower than notated	10 semitones
C Basso	An octave lower than notated	12 semitones
Bb Basso	A major 9 th lower than notated	14 semitones
A Basso	An octave and a minor 3 rd lower than notated	15 semitones

Registral Characteristics: For the horn in F

- C3 to G3 Dark and a bit unfocused
- G3 to C4 Deep and solid
- C4 to G5 Bright and heroic
- G3 to C6 Brilliant and loud

Trumpet

The trumpet is a brass instrument commonly used in classical and jazz ensembles. The trumpet group ranges from the piccolo trumpet with the highest register in the brass family, to the bass trumpet, which is pitched one octave below the standard Bb or C Trumpet.

Trumpet Types

The most common type is the Bb trumpet, but A, C, D, Eb, E, low F, and G trumpets are also available. The C trumpet is most common in American orchestral playing, where it is used alongside the Bb trumpet. Orchestral trumpet players are adept at transposing music at sight, frequently playing music written for the A, Bb, D, Eb, E, or F trumpet on the C trumpet or Bb trumpet.

Trumpet Transpositions

F Trumpet	Up a perfect 4 th	5 semitones
E Trumpet	Up a major 3 rd	4 semitones
Eb Trumpet	Up a minor 3 rd	3 semitones
C Trumpet	Played as written (not transposed)	
B Trumpet	Down a minor 2 nd	1 semitone
Bb Trumpet	Down a major 2 nd	2 semitones
A Trumpet	Down a minor 3 rd	3 semitones

Registral Characteristics: For both the C and Bb trumpet

F#3 to B3	Rather dull
C4 to A5	Clear, bright and most articulate
B5 to D6	Brilliant but strident

Trumpet Articulations

Doodle Tongue

The trumpeter tongues as if saying the word doodle. This is a very faint tonguing similar in sound to a valve tremolo.

Flutter Tonguing

Flutter tonguing is very effective and easy to produce on all brass instruments. The trumpeter rolls the tip of the tongue (as if rolling an "R" in Spanish) to produce a 'growling like' tone.

Growling

Simultaneously playing tone and using the back of the tongue to vibrate the uvula, creating a distinct sound. Most trumpet players will use a plunger with this technique to achieve a particular sound heard in a lot of Chicago Jazz of the 1950s.

Glissandi

Horn and trumpet players can produce a glissando by using a lip slur. Lip slurs are most effective in the upper register, where partials are close together; they are also slightly easier to play by slurring up than down. Trumpeters can slide between notes by depressing the valves halfway and changing the lip tension. Modern repertoire makes extensive use of this technique.

Vibrato

It is often regulated in contemporary repertoire through specific notation. Composers can call for everything from fast, slow or no vibrato to actual rhythmic patterns played with vibrato.

Tremolos

Many notes on the trumpet can be played in several different valve combinations. By alternating between valve combinations on the same note, a tremolo effect can be created.

Noises

By hissing, clicking, or breathing through the instrument, the trumpet can be made to resonate in ways that do not sound at all like a trumpet. Noises may require amplification.

Split Tone

Trumpeters can produce more than one tone simultaneously by vibrating the two lips at different speeds. The interval produced is usually an octave or a fifth.

Lip-Trill or Shake

Also known as "lip-slurs". By rapidly varying air speed, but not changing the depressed valves, the pitch can vary quickly between adjacent harmonic partials. Shakes and lip-trills can vary in speed, and in the distance between the partials. However, lip-trills and shakes usually involve the next partial up from the written note.

Multi-Phonics

Playing a note and "humming" a different note simultaneously. For example, sustaining a middle C and humming a major 3rd "E" at the same time.

Circular Breathing

A technique wind players use to produce uninterrupted tone, without pauses for breaths. The player puffs up the cheeks, storing air, then breathes in rapidly through the nose while using the cheeks to continue pushing air outwards.

Trombone

The trombone is a musical instrument in the brass family. As with all brass instruments, sound is produced when the player's vibrating lips (embouchure) cause the air column inside the instrument to vibrate. Most brass instruments use valves to alter the pitch, but trombones have a telescoping slide mechanism instead. Many modern trombone models also have a valve attachment which lowers the pitch of the instrument. Variants such as the valve trombone and superbone have three valves similar to those on the trumpet.

Registral Characteristics Of The Tenor Trombone

E2 to G3	Dark less strong
A2 to F4	Firm and powerful
G4 to Bb4	Very intense

Registral Characteristics Of The Bass Trombone

- Bb1 to F2 Heavy and quite strong
- G2 to G3 Deep and solid
- A3 to Bb4 Very powerful

Tuba

The tuba is the lowest-pitched musical instrument in the brass family. An orchestra usually has a single tuba, though an additional tuba may be requested. It serves as the bass of the orchestral brass section and it can reinforce the bass voices of the strings and woodwinds. It provides the bass of brass quintets and choirs (though many small brass ensembles will use the euphonium or bass trombone as the lowest voice). It is the principal bass instrument in concert bands, brass bands and military bands, and those ensembles generally have two to four tubas. It is also a solo instrument.

Registral Characteristics Of The Tuba

- D1 to Bb1 Deep and heavy
- C2 to E3 Very strong
- F3 to G4 Getting weaker but quite intense

Percussion

Xylophone



The xylophone is a musical instrument in the percussion family that consists of wooden bars struck by mallets. Like the glockenspiel, the xylophone essentially consists of a set of tuned keys arranged in the fashion of the keyboard of a piano. Each bar is an idiophone tuned to a pitch of a musical scale, whether pentatonic or heptatonic in the case of many African and Asian instruments, diatonic in many western children's instruments, or chromatic for orchestral use.

Marimba



The marimba is a percussion instrument consisting of a set of wooden bars struck with yarn wrapped or rubber mallets to produce musical tones. Resonators or pipes are suspended underneath the bars to amplify the sound of the wooden bars. The bars of a chromatic marimba are arranged like the keys of a piano, with the groups of two and three accidentals raised vertically, overlapping the natural bars to aid

the performer both visually and physically. This instrument is a type of idiophone, but with a more resonant and lower-pitched tessitura than the xylophone.

Vibraphone



The vibraphone is a musical instrument in the struck idiophone subfamily of the percussion family. It consists of tuned metal bars and is usually played by holding two or four soft mallets and striking the bars.

The vibraphone resembles the marimbaphone and steel marimba, which it superseded. One of the main differences between the vibraphone and other keyboard percussion instruments is that each bar suspends over a resonator tube with a motor-driven butterfly valve at the top. The valves connect together on a common axle, which produces a tremolo or vibrato effect while the motor rotates the axle. The vibraphone also has a sustain pedal similar to a piano. With the pedal up, the bars produce a muted sound. With the pedal down, the bars sustain for several seconds, or until muted with the pedal.

The vibraphone is commonly used in jazz music, in which it often plays a featured role and was a defining element of the sound of mid-20th-century "Tiki lounge" exotica, as popularized by Arthur Lyman. It is the second most popular solo keyboard percussion instrument in classical music, after the marimba, and it is part of the standard college-level percussion performance education. It is a standard instrument in the modern percussion section for orchestras, concert bands, and marching bands (as part of the front ensemble).

ORCHESTRATION

Glockenspiel



The glockenspiel is a percussion instrument. It consists of pitched aluminum or steel bars arranged in a keyboard layout. This makes the glockenspiel a type of metallophone, similar to the vibraphone.

The glockenspiel is played by striking the bars with mallets, often made of a hard material such as metal or plastic. Its clear, high-pitched tone is often heard in orchestras, wind ensembles, marching bands, and in popular music.

In German, a carillon is also called a glockenspiel, while in French, the glockenspiel is often called a carillon. In Italian, the term campanelli is often used to refer to the glockenspiel.

Chimes, also known as Tubular Bells

Tubular bells (also known as chimes) are musical instruments in the percussion family. Their sound resembles that of church bells, carillon, or a bell tower; the original tubular bells were made to duplicate the sound of church bells within an ensemble. Each bell is a metal tube, 30–38 mm in diameter, tuned by altering its length. Its standard range is C4–F5, though many professional instruments reach G5. Tubular bells are often replaced by studio chimes, which are a smaller and usually less expensive instrument. Studio chimes are similar in appearance to tubular bells, but each bell has a smaller diameter than the corresponding bell on tubular bells.

Tubular bells are sometimes struck on the top edge of the tube with a rawhide, or plastic-headed hammer. Often, a sustain pedal will be attached to allow extended ringing of the bells. They can also be bowed at the bottom of the tube to produce a very loud, very high-pitched overtone.

The tubes used provide a purer tone than solid cylindrical chimes, such as those on a mark tree.

Chimes are often found in orchestral and concert band repertoire. It rarely plays melody, instead being used most often as a color to add to the ensemble sound. It does have solos occasionally, often depicting church bells.



Crotales

Crotales, sometimes called antique cymbals, are percussion instruments consisting of small, tuned bronze or brass disks. Each is about 10 cm in diameter with a flat top surface and a nipple on the base. They are commonly played by being struck with hard mallets. However, they may also be played by striking two disks together in the same manner as finger cymbals, or by bowing. Their sound is rather like a small tuned bell, only with a much brighter sound and a much longer resonance. Similar to tuned finger cymbals, crotales are thicker and larger; they also have slight grooves in them. The name comes from the Greek crotalon, for a castanet or rattle. Modern crotales are arranged chromatically and have a range of up to two octaves. They are typically available in sets (commonly one octave) but may also be purchased individually. Crotales are treated as transposing instruments; music for crotales is written two octaves lower than the sounding pitch to minimize ledger lines.

Wood Block



A wood block (also spelled as a single word, woodblock) is a small slit drum made from a single piece of wood. The term generally signifies the Western orchestral instrument, though it is descended from the Chinese woodblock. Alternative names sometimes used in ragtime and jazz are clog box and tap box. In orchestral music scores, wood blocks may be indicated by the French bloc de bois or tambour de bois, German Holzblock or Holzblocktrommel, or Italian cassa di legno.

The orchestral wood block of the West is generally made from teak or another hardwood. The dimensions of this instrument vary, although it is either a rectangular or cylindrical block of wood with one or sometimes two longitudinal cavities. It is played by striking it with a stick, which produces a sharp crack. Alternatively, a rounder mallet, soft or hard, may be used, which produces a deeper-pitched and fuller "knocking" sound.

On a drum kit, a wood block is traditionally mounted on a clamp fixed to the top of the rear rim of the bass drum.

Claves

Claves are a percussion instrument consisting of a pair of short, wooden sticks about 20–25 centimeters long and about 2.5 centimeters in diameter. Although traditionally made of wood (typically rosewood, ebony or grenadilla) many modern manufacturers offer claves made of fiberglass or plastic.

When struck, claves produce a bright, penetrating clicking noise. This makes them useful when playing in large dance bands. Claves are sometimes hollow and carved in the middle to amplify the sound.

The basic principle when playing claves is to allow at least one of them to resonate. The usual technique is to hold one lightly with the thumb and fingertips of the non-dominant hand, with the palm up. This forms the hand into a resonating chamber for the clave. Holding the clave on top of fingernails makes the sound clearer. The other is held by the dominant hand at one end with a firmer grip, much like how one normally holds a drumstick. With the end of this clave, the player strikes the resting clave in the center.



A roll can be achieved on the claves by holding one clave between the thumb and first two fingers, and then alternating pressure between the two fingers to move the clave back and forth. This clave is then placed against the resonating clave to produce a roll.

Among the bands to have used claves are the Beatles in their recording "And I Love Her" and The Who in their song "Magic Bus".

Cowbell



The cowbell is an idiophone hand percussion instrument used in various styles of music, such as Latin and rock. It is named after the similar bell used by herdsmen to keep track of the whereabouts of cows. It is used often in rock music.

Gong

A gong is a percussion instrument originating in East Asia and Southeast Asia. Gongs are a flat, circular metal disc that is typically struck with a mallet. They can be small or large in size, and tuned or untuned.

Gongs broadly fall into one of three types: Suspended gongs are more or less flat, circular discs of metal suspended vertically by means of a cord passed through holes near to the top rim. Bossed or nipple gongs have a raised centre boss, or knob, and are often suspended and played horizontally. Bowl gongs are bowl-shaped and rest on cushions. The latter may be considered a member of the bell category. Gongs are made mainly from bronze or brass but there are many other alloys in use.

Gongs produce two distinct types of sound. A gong with a substantially flat surface vibrates in multiple modes, giving a "crash" rather than a tuned note. This category of gong is sometimes called a tam-tam to distinguish it from the bossed gongs that give a tuned note. In Indonesian gamelan ensembles, some

bossed gongs are deliberately made to generate in addition a beat note in the range from about 1 to 5 Hz. The use of the term "gong" for both these types of instrument is common.

Castanets

Castanets, also known as clackers or palillos, are a percussion instrument (idiophone), used in Spanish, Kalo, Moorish, Ottoman, Italian, Sephardic, Swiss, and Portuguese music. In ancient Greece and ancient Rome there was a similar instrument called crotalum. The instrument consists of a pair of concave shells joined on one edge by a string. They are held in the hand and used to produce clicks for rhythmic accents or a ripping or rattling sound consisting of a rapid series of clicks. They are traditionally made of hardwood (chestnut; Spanish: castaño), although fiberglass is becoming increasingly popular.

In practice, a player usually uses two pairs of castanets. One pair is held in each hand, with the string hooked over the thumb and the castanets resting on the palm with the fingers bent over to support the other side. Each pair will make a sound of a slightly different pitch.



Maracas

A maraca, sometimes called rumba shaker or chac-chac, is a rattle which appears in many genres of Caribbean and Latin music. It is shaken by a handle and usually played as part of a pair.

Modern maraca balls are also made of leather, wood or plastic.

Shaker

The word shaker describes various percussive musical instruments used for creating rhythm in music.



They are called shakers because the method of creating the sound involves shaking them, moving them back and forth in the air rather than striking them. Most may also be struck for a greater accent on certain beats. Shakers are often used in rock and other popular styles to provide the ride pattern along with or substituting for the ride cymbal.

Types Of Shaker

A shaker may comprise a container, partially full of small loose objects such as beans, which create the percussive sounds as they collide with each other, the inside surface, or other fixed objects inside the container – as in a rainstick, caxixi or egg shaker.

Cabasa

The cabasa, similar to the shekere, is a percussion instrument that is constructed with loops of steel ball chain wrapped around a wide cylinder. The cylinder is fixed to a long, narrow wooden or plastic handle.

The metal cabasa was created by Martin Cohen, founder of Latin Percussion. This company has built a more durable cabasa that they call an afuche-cabasa (pictured). It provides a metallic, rattling sound when shaken or twisted, similar to the sound of a rattlesnake. It is often used in Latin jazz, especially in bossa nova pieces. Precise rhythmic effects can be gained by the advanced player. The player places his non-dominant hand on the metal chain, to provide pressure, while holding the wooden handle with the other hand and twisting the instrument back and forth depending on the rhythmic pattern desired. In addition to Latin music, many band and orchestra pieces call for the cabasa.



The African original version of the cabasa is called agbe, and is constructed from dried oval or pearshaped gourds with beads strung on the outer surface. There are many versions of this instrument, particularly in Latin music. Cabaça is used in Latin American dance. The cabaça is a natural or synthetic round or pear-shaped gourd covered with a network of beads and finishing in a single handle. This is compared to the metal version used in Latin jazz. Modern adaptations of this instrument include Meinl Percussion foot pedal.

Timpani



Timpani or kettledrums (also informally called timps) are musical instruments in the percussion family. A type of drum categorized as a hemispherical drum, they consist of a membrane called a head stretched over a large bowl traditionally made of copper. Thus timpani are an example of kettle drums, also known as vessel drums and semispherical drums, whose body is similar to a section of a sphere whose cut conforms the head. Most modern timpani are pedal timpani and can be tuned quickly and accurately to specific pitches by skilled players through the use of a movable foot-pedal. They are played by striking the head with a specialized drum stick called a timpani stick or timpani mallet. Timpani evolved from

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military drums to become a staple of the classical orchestra by the last third of the 18th century. Today, they are used in many types of ensembles, including concert bands, marching bands, orchestras, and even in some rock bands.

Timbales

Timbales or pailas are shallow single-headed drums with metal casing. They are shallower than single-headed tom-toms and usually tuned much higher, especially for their size. They were developed as an alternative to classical timpani in Cuba in the early 20th century and later spread across Latin America and the United States.

Timbales are struck with wooden sticks on the heads and shells, although bare hands are sometimes used. The player (called a timbalero) uses a variety of stick strokes, rim shots, and rolls to produce a wide range of percussive expression during solos and at transitional sections of music, and usually plays the shells (or auxiliary percussion such as a cowbell or cymbal) to keep time in other parts of the song. The shells and the typical pattern played on them are referred to as cáscara. Common stroke patterns include abanico, baqueteo (from danzón), mambo and chachachá.



Timbales have average diameters of 33 centimeters (macho drum) and 35 centimeters (hembra drum). Originally made of calfskin, the heads are most commonly made of plastic for increased volume and durability and mounted on a steel rim. The shells are usually made of metal, although wooden shells are also available. In general, the drums are mounted on a stand and played while standing. Smaller timbales called timbalitos are often incorporated into larger drum kits.



Roto Toms



The Rototom is a drum developed by Al Payson, Robert Grass, and Michael Colgrass that has no shell and is tuned by rotating. A rototom consists of a single head in a die-cast zinc or aluminum frame. Unlike most other drums, this type has a variable definite pitch. Composers are known to write for them as tuned instruments, demanding specific pitches. Rototoms are often used to extend the tom range of a standard drum kit. They were commercialized by the drumhead company Remo Inc., of North Hollywood, California.

Bongos



Bongos are an Afro-Cuban percussion instrument consisting of a pair of small open bottomed hand drums of different sizes. They are struck with both hands, most commonly in an eight-stroke pattern called martillo (hammer). They are mainly employed in the rhythm section of son cubano and salsa ensembles, often alongside other drums such as the larger congas and the stick-struck timbales.

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Bongo drums are about 20 centimeters high and have diameters of approximately 20 centimeters and 25 centimeters (the smaller drum is called macho, male, and the larger drum, hembra, female). They are the smallest drums in Latin percussion, some models being only 15 centimeters in diameter. The shells of the drums and the bridge (the small block that joins them) are usually made of wood, although fiberglass is also common. The heads are typically made of calfskin and attached to the shells via steel hardware that enables their tuning. Originally, metal tacks were used, so tuning had to be done by heating the skins.

Bongo drums produce relatively high-pitched sounds compared to conga drums, and should be held behind the knees with the larger drum on the right when right-handed. It is most often played by hand and is especially associated in Cuban music with a steady pattern or ostinato of eighth-notes known as the martillo (hammer). They are traditionally played by striking the edge of the drumheads with the fingers and palms. The glissando used with bongó de monte is done by rubbing the third finger, supported by the thumb, across the head of the drum. The finger is sometimes moistened with saliva, or sweat before rubbing it across the head. Bongos can also be played on a stand, as is the case with concert orchestras and bands. In classical music performances, bongos are usually struck with mallets or drumsticks.

Conga



The conga, also known as tumbadora, is a tall, narrow, single-headed drum from Cuba, Congas are staved like barrels and classified into three types: quinto (lead drum, highest), tres dos or tres golpes (middle), and tumba or salidor (lowest). Congas were originally used in Afro-Cuban music genres such as conga (hence their name) and rumba, where each drummer would play a single drum. Following numerous innovations in conga drumming and construction during the mid-20th century, as well as its internationalization, it became increasingly common for drummers to play two or three drums. Congas have become a popular instrument in many forms of Latin music such as son (when played by conjuntos), descarga, Afro-Cuban jazz, salsa, songo, merengue and Latin rock.

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Most modern congas have a staved wooden or fiberglass shell and a screw-tensioned drumhead. Since the 1950, congas are usually played in sets of two to four, except for traditional rumba and conga, in which each drummer plays one conga. The drums are played with the fingers and palms of the hand. Typical congas stand approximately 75 centimeters (30 in) from the bottom of the shell to the head. The drums may be played while seated. Alternatively, the drums may be mounted on a rack or stand to permit the player to play while standing. While they originated in Cuba, their incorporation into the popular and folk music of other countries has resulted in diversification of terminology for the instruments and the players. In Cuba, congas are called tumbadoras.

Playing Techniques

There are four basic strokes in conga drumming:

- 1. **Open Tone:** played with the four fingers near the rim of the head, producing a clear resonant sound with a higher pitch than muffled and bass tones.
- Muffled, Muted, Closed of Flesh Tone: or simply "muff": like the open tone, it is made by striking the drum with the four fingers, but holding the fingers against the head to muffle the tone. It can also be played with a cupped hand or the heel of the hand.
- 3. **Bass Tone:** played with the full palm, in a slightly cupped position, somewhat off center on the head. It produces a low muted sound.
- 4. Slap Tone: the most difficult technique, producing a loud clear "popping" sound. The muted or pressed slap tone (toque tapado normal) involves playing an open tone while the other hand rests on the drumhead, which produces a higher pitch. There are open (tono tapado abierto) and half-open (tono tapado semi-abierto) variants, in which the playing hand briefly rests on the edge of the drumhead after the stroke, followed by another stroke with the other hand. When played at fast and short intervals, this is called floreo, which is often used to instill emotion in the dancers.

Other strokes can be used to enhance the timbral palette of the instrument. They are not used by all drummers, but have become the hallmark of congeros such as Tata Güines.

- 5. Touch or Toe Tone: as implied by the name, this tone is produced by just touching the fingers or heel of the palm to the drum head. It is possible to alternate a touch of the palm with a touch of the fingers in a maneuver called heel-toe, which can be used to produce the conga equivalent of drumrolls.
- 6. **Nails Stroke:** played with the tip of the nails, usually finger by finger in quick succession, starting with the pinky.
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Glissando and Pitch Bending

The deslizado, moose call or glissando is done by rubbing the third finger, supported by the thumb, across the head of the drum. The finger is sometimes moistened with saliva or sweat, and sometimes a little coat of beeswax is put on the surface of the conga head to help make the sound. The moose call is also done on the bongos. To bend the pitch of the congas, a conguero sometimes uses his elbow to shift around on and apply pressure to different parts of the head; this causes the note to change. This is not a traditional stroke, but it is common in modern salsa and rumba.

Djembe



Sound And Beating Technique

A djembe or jembe is a rope-tuned skin-covered goblet drum played with bare hands, originally from West Africa. The djembe has a body (or shell) carved of hardwood and a drumhead made of untreated (not limed) rawhide, most commonly made from goatskin. Excluding rings, djembes have an exterior diameter of 30–38 cm (12–15 in) and a height of 58–63 cm (23–25 in). The majority have a diameter in the 13 to 14 inch range. The weight of a djembe ranges from 5 kg to 13 kg (11– 29 lb) and depends on size and shell material. A medium-size djembe carved from one of the traditional woods (including skin, rings, and rope) weighs around 9 kg (20 lb). The djembe can produce a wide variety of sounds,

making it an extremely versatile drum. The drum is very loud, allowing it to be heard clearly as a solo instrument over a large percussion ensemble.

For its size, the djembe is an unusually loud drum. The volume of the drum rises with increasing skin tension. On a djembe tuned to solo pitch, skilled players can achieve sound pressure of more than 105 dB, about the same volume as a jackhammer.

Djembe players use three basic sounds: bass, tone, and slap, which have low, medium, and high pitch, respectively. These sounds are achieved by varying the striking technique and position. Other sounds are possible (masters achieve as many as twenty-five distinctly different sounds), but these additional sounds are used rarely, mainly for special effects during a solo performance (djembe kan, literally, "the sound of

the djembe"). A skilled player can use the sounds to create very complex rhythmic patterns; the combination of rhythm and the differently pitched sounds often leads an inexpert listener to believe that more than one drum is being played.

The bass sound is produced by striking the drum with the palm and flat fingers near the center of the skin. Tone and slap are produced by striking the drum closer to the edge; the contact area of the fingers determines whether the sound is a tone or a slap. For a tone, most of the area of the fingers and the edge of the palm contact the skin whereas, for a slap, the contact area is limited to the edge of the palm and the fingertips. The basic sounds are played "open", meaning that the hands rebound immediately after a strike, so the contact time with the skin is as short as possible.

Acoustically, a djembe is a Helmholtz resonator: the frequency of the bass is determined by the size and shape of the shell and independent of the amount of tension on the skin. In contrast, the pitch of tones and slaps rises as the tension of the skin is increased. The bass has a frequency of 65–80 Hz. Depending on the size of the drum and the amount of tension on the skin, tone frequency varies from 300 Hz to 420 Hz and slap frequency from 700 Hz to 1000 Hz, with audible overtones reaching beyond 4 kHz.

Cajón



A cajón is a box-shaped percussion instrument originally from Peru, played by slapping the front or rear faces (generally thin plywood) with the hands, fingers, or sometimes implements such as brushes, mallets, or sticks. Cajones are primarily played in Afro-Peruvian music (specifically música criolla), but has made its way into flamenco as well. The term cajón is also applied to other box drums used in Latin American music, such as the Cuban cajón de rumba and the Mexican cajón de tapeo.

Playing styles

The player sits astride the box, tilting it at an angle while striking the head between their knees. The percussionist can play the sides with the top of their palms and fingers for additional sounds. Some percussionists attach a bass drum pedal to the instrument, enabling them to play it with a single foot.

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The instrument has been played not only with hands, but also with plastic and metal brushes, as used for drum kits, for example with the Pen Technique, developed by Patrizio Migliarini, which allows the musician to play jazz and funky rhythms with a completeness and dynamic richness close to that of a drums, through the use of metal brushes. Another way of playing the cajón is to use an ordinary bass drum pedal, thus turning the cajón into an indirect percussion instrument which can be played with the feet. This enables the player to beat it just like a pedal-bass drum, thus leaving the hands (and one other foot) free to play other instruments. On the other hand, it also restricts the player's standard cajón-playing position, as when the cajón is placed on the ground, in the bass drum location, it is hard for the performer to slap it with her or his hands.

Tambourine

The tambourine is a musical instrument in the percussion family consisting of a frame, often of wood or plastic, with pairs of small metal jingles, called "zills". Classically the term tambourine denotes an instrument with a drumhead, though some variants may not have a head. Tambourines are often used with regular percussion sets. They can be mounted, for example on a stand as part of a drum kit (and played with drum sticks), or they can be held in the hand and played by tapping or hitting the instrument.

Tambourines come in many shapes with the most common being circular. It is found in many forms of music: Turkish folk music, Greek folk music, Italian folk music, French folk music, classical music, Persian music, samba, gospel music, pop music, country music, and rock music. The tambourine can be held in the hand or mounted on a stand, and can be played in numerous ways, from stroking or shaking the jingles to striking it sharply with the hand or a stick or using the tambourine to strike the leg or hip.

Tambourine Rolls

There are several ways to achieve a tambourine roll. The easiest method is to rapidly rotate the hand holding the tambourine back and forth, pivoting at the wrist.

Thumb Roll

An advanced playing technique is known as the thumb or finger roll. The middle finger or thumb is moved over the skin or rim of the tambourine, producing a fast roll from the jingles on the instrument. The thumb or middle finger of the hand not holding the tambourine is run around the head of the instrument

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approximately one centimeter from the rim with some pressure applied. If performed correctly, the finger should bounce along the head rapidly, producing the roll. Usually, the end of the roll is articulated using the heel of the hand or another finger. Beeswax or rosin is commonly smeared around the edges of the head to assist in the technique. These materials increase friction making it easier to execute. A continuous roll can be achieved by moving the thumb in a "figure of 8" pattern around the head.

Steel Drum



The steelpan (also known as a pan, steel drum, and sometimes, collectively with other musicians, as a steelband or steel orchestra) is a musical instrument originating from Trinidad and Tobago. Steelpan musicians are called pannists. The modern pan is a chromatically pitched percussion instrument made from 55 gallon industrial drums. Drum refers to the steel drum containers from which the pans are made; the steel drum is more correctly called a steel pan or pan as it falls into the idiophone family of instruments, and so is not a drum.

Pan is played using a pair of straight sticks tipped with rubber; the size and type of rubber tip varies according to the class of pan being played. Some musicians use four pansticks, holding two in each hand.

Guiro



The güiro is a Latin American percussion instrument consisting of an open-ended, hollow gourd with parallel notches cut in one side. It is played by rubbing a stick or tines (see photo) along the notches to produce a ratchet sound. George Harrison plays one on The Beatles' "Tell Me What You See" The güiro is commonly used in Puerto Rican, Cuban and other forms of Latin American music, and plays a key role in the typical rhythm section of important genres like son, trova and salsa. Playing the güiro usually requires both long and short sounds, made by scraping up and down in long or short strokes.

The güiro, like the maracas, is often played by a singer. It is closely related to the Cuban guayo, Dominican güira, and Haitian graj which are made of metal. Other instruments similar to the güiro are the Colombian guacharaca, the Brazilian reco-reco, the quijada (cow jawbone) and the frottoir (French) or fwotwa (French Creole) (washboard).

Triangle

The triangle is an idiophone type of musical instrument in the percussion family. It is a bar of metal, usually steel but sometimes other metals such as beryllium copper, bent into a triangle shape. The instrument is usually held by a loop of some form of thread or wire at the top curve. While the triangle theoretically has a definite pitch, it is obscured by the overtones that are produced when struck.

Vibraslap

The vibraslap is a percussion instrument consisting of a piece of stiff wire (bent into a U-shape) connecting a wooden ball to a hollow box of wood with metal "teeth" inside. The percussionist holds the metal wire in one hand and strikes the ball (usually against the palm of their other hand). The box acts as a resonating body for a metal mechanism placed inside with a number of loosely fastened pins or rivets that vibrate and rattle against the box. The instrument is a modern version of the jawbone.

Quica

The cuica is a Brazilian friction drum with a large pitch range, produced by changing tension on the head of the drum. Cuica is Portuguese for the gray four-eyed opossum (Philander opossum) which is known for its high-pitched cry. It is frequently used in carnivals, as well as often in samba music. The tone it produces has a high-pitched squeaky timbre. It has been called a 'laughing gourd' due to this sound. Many also liken its sound to that of a monkey.